2022 Diesel Emissions Reduction Act (DERA) State Grants

Work Plan and Budget Narrative Template

INSTRUCTIONS: States and territories applying for 2022 DERA State Grant funds should use this template to prepare their Workplan and Budget Narrative.

Please refer to the 2021-2022 DERA State Grants Program Guide for full program details, eligibility criteria and funding restrictions, and application instructions.

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SUMMARY PAGE

Project Title: Alaska Clean Diesel Project FFY 22

Project Manager and Contact Information

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WORK PLAN UPDATED NOVEMBER 2022

Project Budget Overview:

	2021*	2022
EPA Base Allocation	$337,786	$346,046
EPA Match Bonus (if applicable)	$168,893	$173,023
Voluntary Matching Funds (if applicable)	$337,786	$346,046
Mandatory Cost-Share	$168,893	$173,023
TOTAL Project Cost	**$1,013,358**	**$1,038,138**

*If state participated in 2021

Project Period for 2021-2022 DERA State Grants

October 1, 2021 – September 30, 2024

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 the 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 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 the replacement of 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 and they are as clean as or cleaner than nonroad 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 workplan includes EPA's concurrence with AEA's State of Alaska DERA Implementation Plan, a Waiver Request submitted via email on 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 2022 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 550 hp and larger) 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

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SCOPE OF WORK

The Alaska Energy Authority (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 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 engines/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 plant 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 documents.

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 providethe optimum reliability for the available engine horsepower.

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 2022 EPA grant with state, local, and other funding as available.[1]

For engines temporarily out of service, the utility's intent to return the engine to service will be documented, in addition to the FFY22 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 locally. 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 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 and updated in 2012. In 2020 AEA embarked on an updated assessment that was completed on December 30, 2021. 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

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

workplan 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, 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 Manager of Rural Energy Programs, 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:
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 the Project Officer.
- Task 2: Design and identify specifications – Procure contractual assistance for the design of the engine/generator installations and development of specifications specific to each installation.
- Task 3: Contract 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 installation.
- 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 the startup and commissioning of the engines.
- Task 6: Final closeout of the award with EPA.
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The project timeline shown below is based on an EPA Clean Diesel grant execution date of October 1, 2021, to September 30, 2024. FFY 21 and 22 projects overlap, with the timeline for FFY 22 shown in red.

				21	2022				2023				24				25
	Days	Start	Finish	O	J	A	J	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	9/30/2024														
T6		10/1/2024	12/30/2024														

EPA DERA Programmatic Priorities

All of the projects proposed in this workplan 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 schools. 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"

2. **Most Cost-Effective**
   It is in the best interest of 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 the 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, and 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 means 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 disproportionally 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 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 the 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. In most rural communities, diesel costs anywhere from six to twelve 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 the EPA 2022 - 2026 Strategic Plan:**
   The fuel efficiency and reduction of emissions (greenhouse gases), which cause climate change, resulting from this project support the EPA's primary objective of improving air quality and ensuring areas meet high air quality standards. The Alaska Native Villages to receive the DERA funds are underserved and overburdened communities. The efficiency of the new engines will result in less diesel fuel being purchased, therefore more funding can be used for drinking water and sewer upgrades in the communities. AEA has considered all the goals of the strategic plan whicht can be found at https://www.epa.gov/planandbudget/strategicplan .

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
Bettles	Cummins LTA 10 Nonroad Uncontrolled 390 HP	John Deere 4045HFG82 Nonroad Tier 3 148 HP
Bettles	Caterpillar 3406 Nonroad Uncontrolled 460 HP	John Deere 4045HFG82 Nonroad Tier 3 148 HP
Tenakee Springs	John Deere 6068TF150 Nonroad Uncontrolled 150 HP	John Deere 6068AFM85 Marine Tier 3 245 HP
Tenakee Springs	John Deere 6068TF150 Nonroad Tier 2 150 HP	John Deere 6068AFM85 Marine Tier 3 245 HP

In Bettles, the State DERA program will replace two mechanically governed, uncontrolled Nonroad engines with Nonroad Tier 3 engines. Bettles uses approximately 40,000 gallons of diesel fuel to generate about 490,000 kWh annually. Estimated emissions reductions for Bettles are shown in the tables below.

BETTLES

Annual Results (short tons)	NOx	PM2.5	HC	CO	CO2	Fuel
Baseline Engines	6.70	0.38	0.56	2.49	448	39,781
Amount Reduced	4.47	0.27	0.39	1.77	-12	-1,070
Percent Reduced	67%	71%	70%	71%	-3%	-3%

over a 10-year lifespan would provide the following reductions.

Lifetime Results (short tons)	NOx	PM2.5	HC	CO	CO2	Fuel
Baseline Engines	66.97	3.81	5.55	24.93	4475	397,810
Amount Reduced	44.70	2.72	3.88	17.73	-120	-10,700
Percent Reduced	67%	71%	70%	71%	-3%	-3%

Note: The DERA Replacement engine is estimated to run 94% of the year and produce 462,000 kWh annually.

In Tenakee Springs, the State DERA program will replace one Nonroad Uncontrolled engine and one Nonroad Tier 2 engine with Marine Tier 3 engines. Tenakee Springs uses approximately 34,000 gallons of diesel fuel to generate about 407,000 kWh annually. Estimated emissions reductions for Tenakee Springs are shown in the tables below.

TENAKEE SPRINGS

Annual Results (short tons)	NOx	PM2.5	HC	CO	CO2	Fuel
Baseline Engines	4.25	0.23	0.36	1.40	378	33,604
Replacement Engines	2.08	0.18	0.27	0.91	-19	-1,704
Percent Reduced	49%	77%	75%	65%	-5%	-5%

over a 10-year lifespan would provide the following reductions.

Lifetime Results (short tons)	NOx	PM2.5	HC	CO	CO2	Fuel
Baseline Engines	42.54	2.34	3.55	14.03	3780	336,040
Amount Reduced	20.83	1.79	2.67	9.15	-192	-17,040
Percent Reduced	49%	77%	75%	65%	-5%	-5%

Note: The DERA Replacement engines are estimated to run 94% of the year and produce 384,000 kWh annually.

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 lower-emission gensets will benefit the selected communities by improving health and the environment. Fewer pollutants in the air lower the 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 emissions.

- **Medium-term outcomes** – The new electronically controlled certified marine engines and low PM emitting non-road engines will provide a reduction 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 10 years. Replacing older technology engines with newer, and cleaner engines will provide 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. 193 rural Alaskan communities 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 is the highest in the nation. Through ongoing 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.

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BUDGET NARRATIVE

Project Budget

AEA's current DERA workplan includes the 2021-2022 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 nonroad engines for replacement of non-certified and lower-tier engines, reduced mandatory cost-share requirements for projects benefiting rural Alaska Tribal people, and increased administrative cost cap due to AEAs 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:

2022 Itemized Project Budget					
		Voluntary Match			
Budget Catagory	EPA Allocation	VW Mitigation Trust Funds	Other (RPSU)	Mandatory Match (RPSU)	TOTAL
1. Personnel	$ 33,856		$ 22,345	$ 11,511	$ 67,712
2. Fringe Benefits	$ 20,013		$ 13,208	$ 6,804	$ 40,025
3. Travel	$ 10,600		$ 6,996	$ 3,604	$ 21,200
4. Equipment					$ -
5. Supplies					$ -
6. Contractual					$ -
7. Other: Subaward Grants	$ 434,206		$ 303,497	$ 151,104	$ 888,807
8. Total Direct Charges					
9. Indirect Charges	$ 20,394				$ 20,394
10. TOTAL (Indirect + Direct Charges	**$ 519,069**		**$ 346,046**	**$ 173,023**	**$ 1,038,138**
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 after the project, providing project and grant oversight, and completing site visits to document project completion. Included are the AEA Manager of Rural Energy Programs, project manager, rural electric utility worker, and circuit rider staff time to help the sub-award grantees, if requested, with

start-up, commissioning and connection of the engines/generators. The hourly billable wage totals for each staff position are shown in this table.

Federal Fiscal Year 2022 Personnel Wages w/o Benefits				
Category	EPA	Voluntary Cost Share (RPSU)	Mandatory Cost Share (RPSU)	**Total**
Rural Program Manager 200 hrs, $68.79 /hr wage FTE: 10%	$ 6,879	$ 4,540	$ 2,339	**$ 13,758**
Project Manager 500 hrs, $51.51/hr wage, FTE: 25%	$ 12,877	$ 8,499	$ 4,378	**$ 25,755**
Rural Assistance Manager 100 hrs, $62.29 /hr wage FTE: 10%	$ 3,115	$ 2,056	$ 1,059	**$ 6,229**
Circuit Rider 250hrs, $49.79 hr wage FTE: 13%	$ 6,224	$ 4,108	$ 2,116	**$ 12,448**
Rural Electric Utility Worker @ 200 hrs, $47.61 hr wage FTE: 10%	$ 4,761	$ 3,142	$ 1,619	**$ 9,522**
Total	**$ 33,856**	**$ 22,345**	**$ 11,511**	**$ 67,712**

- **Program Manager:**
  Monitors the AEA project staff and project to ensure all regulations and requirements are being followed at the state and federal level. Provides high level direction and guidance to the Project Manger as needed. May travel to the sites for inspections and provide technical assistance when needed.
- **Project Manager:**
  Will prepare an amendment to the DERA workplan, the project management plan, provide project oversight, review and accept plans, procedures, deliverables and reports. The Project Manager(PM) will be responsible for project communication between sub grantees, consultants, and the AEA team. The PM will track specific contractual deliverables against the schedule to ensure contactors are on track to meet critical milestones. The PM will be the primary point of contact for the DERA award.
- **Rural Assistance Program Manager, Circuit Rider, and the Rural Electric Utility Worker:**
  Will offer quality assurance and quality control during each phase of construction, in partnership with the consulting engineers. Periodic onsite inspections will be performed and the Rural Utility Worker staff will be on site for substantial completion and final testing and inspection.

2. **Fringe Benefits**
   Benefits include Health Insurance (10%), Public Employees Retirement System (22%), Supplemental Benefits 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.

	Federal Fiscal Year 2022 Fringe Benefits			
Category	EPA	Voluntary Cost Share (RPSU)	Mandatory Cost Share (RPSU)	**Total**
Health Insurance Premium 10% (avg)	$ 7,005	$ 4,623	$ 2,382	**$ 14,010**
Public Employees Retirement System 22%	$ 10,006	$ 6,604	$ 3,402	**$ 20,012**
Supplemental Benefits System 6.13%	$ 1,401	$ 925	$ 476	**$ 2,802**
Medicare 1.45%	$ 800	$ 528	$ 272	**$ 1,601**
Workers Compensation 1.01%	$ 601	$ 396	$ 204	**$ 1,201**
Unemployment 0.40%	$ 200	$ 132	$ 68	**$ 400**
Total	**$ 20,013**	**$ 13,208**	**$ 6,804**	**$ 40,026**

3. Travel

This budget includes two trips for one person to each of the up to five communities[2] 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 $1200, ground transportation per visit $500, per diem $60/day, lodging $150/night. Presumed each trip is for two days with an overnight stay (two days of per diem) a total of ten 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 a final 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.

[2] This is budgeted with flexibility depending on sub awardees and allowing for a federal site monitor.

Federal Fiscal Year 2021 - 2022 Travel				
Category	EPA	Voluntary Cost Share (RPSU)	Mandatory Cost Share	**Total**
Airfare for 1 person, 2 trips per village, 5 villages from Anchorage, 10 roundtrip tickets	6,000.00	3,960.00	2,040.00	**12,000.00**
Lodging for 1 person, 2 trips per village, 5 villages, 2 nights per trip, $150 per night, 20 nights	1,500.00	990.00	510.00	**3,000.00**
Per diem for 1 person, 2 trips per village, 5 villages, 2 days per trip, $60 day, 20 days	600.00	396.00	204.00	**1,200.00**
Surface transportation, 2 trips per village, 5 villages, 10 rentals includes car/four wheeler, gas, parking, etc $500 per rental	2,500.00	1,650.00	850.00	**5,000.00**
Total	**10,600.00**	**6,996.00**	**3,604.00**	**21,200.00**

4. Equipment

There are no Equipment costs associated directly with 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 with 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 with 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 grant[3]. These expenses will be reported to EPA through the "Other" line. Below is a breakout of the budget for these funds

AEA will sub-award 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 matches will go towards the engineering, freight, design modifications, purchase, and installation of DERA qualified equipment.

Federal Fiscal Year 2021 - 2022 Subaward				
Category	EPA	RPSU	Mandatory Match (RPSU)	**Total**
Labor	$ -	$ -	$ -	**$ -**
Freight	$ 26,052	$ 18,210	$ 9,066	**$ 53,328**
Contractual	$ 173,683	$ 121,399	$ 60,442	**$ 355,523**
Material and Engines	$ 234,471	$ 163,888	$ 81,596	**$ 479,956**
Combined Totals	**$ 434,206**	**$ 303,497**	**$ 151,104**	**$ 888,807**

Federal Fiscal Year 2022 Bettles				
Category	EPA	Voluntary Match (VW)	Mandatory Match (RPSU)	**Total**
Labor	$ -	$ -	$ -	**$ -**
Freight	$ 9,210.00	$ 6,078.60	$ 3,131.40	**$ 18,420**
Contractual	$ 61,400.00	$ 40,524.00	$ 20,876.00	**$ 122,800**
Material and Engines	$ 82,890.00	$ 54,707.40	$ 28,182.60	**$ 165,780**
Combined Totals	**$ 153,500**	**$ 101,310**	**$ 52,190**	**$ 307,000**

[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.

Federal Fiscal Year 2022 Tenakee Springs				
Category	EPA	RPSU	Mandatory Match (RPSU)	**Total**
Labor	$ -	$ -	$ -	**$ -**
Freight	$ 17,454	$ 11,520	$ 5,934	**$ 34,908**
Contractual	$ 116,361	$ 76,799	$ 39,563	**$ 232,723**
Material and Engines	$ 157,088	$ 103,678	$ 53,410	**$ 314,176**
Combined Totals	**$ 290,904**	**$ 191,996**	**$ 98,907**	**$ 581,807**

8. Direct Charges

Total direct charges for the project come to $1,017,744. This includes funds from EPA DERA, Voluntary Cost Share, and Mandatory Cost Share (State capital funds). An estimated $888,807 will be in sub-award grants to rural Alaskan communities. $128,937 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 is further detailed in Appendix VII for indirect costs. AEA met internally, with the Denali 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 estimated at $20,394 for this award – the calculation is as follows: 10% federal staff and travel ($12,894). Assume two grants under one contract greater than $25,000/each = $7,500. $20,394 estimated total.

10. Total Program Funds

The State of Alaska has chosen to make the full voluntary match to the Federal FY 2022 Clean Diesel grant, totaling $346,046. The matching funds will be used towards eligible Clean Diesel project costs. In addition, the state is providing $173,023 of Mandatory Cost Share. AEA plans to use AEAs Rural Power System Upgrade Program (RPSU) funds for the voluntary match ($346,046). The Mandatory Cost Share ($173,023) 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 2023, 2024, and 2025. 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 workplan includes the 2021 – 2022 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 2022 Clean Diesel grant, totaling $346,046. The matching funds will be used towards eligible Clean Diesel project costs. In addition, the state is providing $173,023 of Mandatory Cost Share. AEA plans to use AEAs Rural Power System Upgrade Program (RPSU) funds for the voluntary match ($346,046). The Mandatory Cost Share ($173,023) 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 2023, 2024, and 2025. 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.