

PROJECT TITLE

Rural Alaska Microgrid Transformation

TOPIC AREAS 3

Grid Innovation Program

Technical and business points of contact:

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Names of all team member organizations:

Alaska Municipal League	Non-profit, local government association
Alaska Center for Energy and Power	University research center
Alaska Native Tribal Health Consortium	Non-profit, Tribal government services

Names of the senior/key personnel and their organizations:

Alaska Energy Authority	Conner Erickson, Director of Planning
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Alaska Center for Energy and Power	Jeremy Kasper
Alaska Native Tribal Health Consortium	Dustin Madden

Project location(s): Alaska, statewide Rural, Tribal communities that are functioning as power production islands. All projects that will ultimately be forwarded under this application will be islanded from the Alaskan Railbelt, which is Alaska's main power generation transmission system.

Any statements regarding confidentiality: None

The reliance on diesel negatively impacts the economy and public health of rural, disadvantaged communities. This project provides pathways to necessary improvements that will transform communities, displacing millions of gallons of diesel and reducing the carbon emissions thereof. Figure 1 provides a map of Alaska communities with microgrids that are eligible for Power Cost Equalization (PCE), where costs are significantly higher than their urban counterparts.

Project Goal:

The goal of these transformed community microgrids is to replace the baseload diesel power production with renewable energy. Hydro, solar, and wind are the primary renewable power sources found to be successful in Alaska. In addition, many of the possible hydro projects would produce more power than could be used by typical community demand. This excess power would be used for community heat and would enable increased capacity for energy storage, which is a critical resource in rural Alaska. This use of excess electricity for heat reduction would displace heating oil, wood burning, diesel, and other types of fuel.

This project rests on multiple critical success factors: (1) Feasibility of project technologies in rural Alaska communities; (2) Process innovation, and the combination of technologies; (3) Partner contributions, and appropriate levels of analysis; (4) Cost of materials and services, and supply chain availability; and (5) Sustainability of operations, and planning for maintenance and operations. Project locations will be determined based on level of disadvantage and potential to meet the critical success factors. The project selection team will evaluate the availability of skilled workforce – and potential to offer skills training as part of a community benefits plan – and overall benefit to the community that includes lowering costs and addressing environmental justice factors.

The [U.S. Energy Information Administration](#)¹ (EIA) highlights key data points, which this project will contribute solutions to, 1) Alaska ranks second only to Hawaii in the share of its total electricity--14% in 2022--generated from petroleum; and 2) in 2022, Alaska generated about 33% of its total electricity from renewable energy sources. The state has a non-binding goal to generate 50% of its electricity from renewable and alternative energy sources by 2025.

DOE Impact:

The incredible remoteness of rural Alaskan communities has the effect of extremely high project costs. This, along with the fact that the rural communities are paying very high energy costs, has made project funding a difficult process. The State of Alaska, local and Tribal governments, and utilities cannot bear this cost alone, and lack sufficient resources to enable a transition to lower carbon energy sources that will reduce emissions and lower costs. DOE funding would unlock dozens of community projects that have gathered enough funding for engineering and design but are waiting for funding sources to complete procurement and construction. For reference, AEA has managed the utilization of \$300 million to implement more than 100 projects from 2008 to 2022, through its Renewable Energy Grant Program (REF), which had variable and limited funding based on available State appropriations. The REF, in direct support of rural, majority tribal, disadvantaged communities has provided more than 80% of total funding towards projects in those rural communities.

Renewable Energy Investment in Alaska by Energy Source, 2010-2020

Primary Energy Source	Investment (\$millions)	% of Total
Hydroelectric	\$330	48%
Wind	\$240	35%
Biomass	\$30	5%
Geothermal (Testing and Assessment)	\$30	4%
Solar	\$10	2%
Other Renewables	\$50	7%
Total	\$690	100%

Investment in Alaska Renewable Energy Projects, 2010-2020

\$690 million invested
260 Projects
160 Communities
448 million Pounds of CO2 Offset Annually
15-20 Construction Jobs per million Invested

Figure 2: Renewable Energy Investment in Alaska by Energy Source, 2010-2020

Community Benefits Plan:

Job Quality and Equity – The Community Benefits Plan identifies the potential for project activities in an estimated twenty rural, disadvantaged communities with islanded micro-grids that are reliant on diesel power generation. These systems are emissions-intensive, expensive, and frequently experience disruption. These projects will result in reduced emissions, lower costs, and more reliable power delivery. Each project will include the deployment of clean power as part of the energy infrastructure. AEA’s process will include a focus on minority business enterprises, and encouraging project delivery by Alaska Native regional and village corporations. AEA will provide training and skills development as part of its project planning and through construction, and work with labor and workforce development partners to maintain job quality and equity. No limitations will be placed on ensuring workers have the free and fair chance to join a union. AEA will work through the Alaska Municipal League (AML) to engage the University of Alaska, Associated General Contractors, and Alaska AFL-CIO in this process.

Project Benefits: AEA will partner with AML to conduct an equity assessment within and between communities, as part of the project identification and implementation process. The CBP provides an overview of DACs in Alaska that would be eligible applicants, and a process for working with municipal and Tribal leaders, utilities, and regional partners to deliver projects. Each project will be located in a rural community where the majority of the population is Indigenous. Public engagement will feature ways in which the project activities may have ancillary community benefits – beyond the direct impact of the energy improvements – that include workforce and enterprise development, skills training, and resilience planning.

Long-Term Constraints: AEA does not anticipate any long-term constraints or impacts to participating communities. The deployment of renewable power systems and carbon-reducing technologies in Alaska has been accomplished without diminishing access to natural resources, nor interference with Tribal cultural resources. Extensive stakeholder engagement ensures continued access to water and subsistence resources. Project cleanup costs, including waste, will be backhauled out of communities or repurposed through agreements with local government.

Climate Resilience Strategy: Alaska experiences the impacts of climate change at a higher rate than the rest of the nation, but AEA and community partners have extensive experience implementing resilient projects that can withstand change and high impact events. AEA project planning takes into account climate variability and change, and includes resilience as part of its overall strategy in developing projects. A key component of this strategy is to work with partners that are at the forefront of climate resilience, including the Denali Commission, an independent federal agency designed to provide critical infrastructure, and economic support throughout Alaska.

Technical Description, Innovation, and Impact

Relevance and Outcomes

Description of the Project: AEA has successfully managed hundreds of grid improvement projects in rural Alaska's, the majority of which have delivered benefits to disadvantaged communities. AEA envisions the "Rural Alaska Microgrid Transformation" to significantly increase its scale and scope, and proposes to implement a carefully managed process to identify, vet, and support the deployment of multiple renewable energy projects in rural communities. This effort will leverage AEA's technical expertise and program management, as well as experience working in rural Alaska, to engage partners, stakeholders, and project proponents in an efficient and effective system of project evaluation and deployment. This project will enable AEA to transform Alaska's rural microgrids, making a significant investment toward Alaska's future and helping to meet its renewable energy goals and carbon neutrality. AEA proposes to manage as much as \$500 million through a competitive, focused application process that moves projects from concept through permitting to construction.

AEA will initiate a call for expressions of interest through a request for application process that captures current needs of rural, disadvantaged communities. Local and Tribal governments, utilities, and private sector project proponents will provide relevant information that is consistent with program goals. A project review team will vet these proposals to determine where greatest impact can be achieved. By acting as an intermediary, and leveraging its considerable expertise working in and with disadvantaged Alaska communities, AEA will maximize the opportunity for community engagement and provide an efficient way in which to meet the needs of many communities at once.

Rural Alaska Microgrid Transformation will result in an estimated twenty projects across the state, managed through a multi-stage, multi-year process that delivers project development and technical assistance along a community's energy pathway, from concept through engineering and design to construction. This intensive effort will include a cohort approach to similarly situated projects, all of which contribute to the project's overall goals of resilience, carbon reduction, and community benefits.

Grid Outcomes: This project is meant to transform rural micro-grids, isolated systems serving communities with fewer than 10,000 residents, which currently rely on diesel for the majority of their power production. The project's grid-benefitting outcomes are Alaska-proven concepts of how to effectively integrate renewables into microgrids, thereby ensuring lower carbon emissions and more resilient systems. This project will transform community resilience by implementing a shift in generation and contemplating new and different load scenarios. AEA will prioritize projects that demonstrate grid improvements relative to 1) current age, 2) system inefficiency and reliability, 3) high maintenance and operational costs, and 4) carbon emissions. Projects will contribute to a clean energy transition and anticipate and mitigate climate disruption.

Technologies Used: The project will utilize three proven renewable energy technologies through the deployment of small hydro, solar, and wind power. This project will contribute to the diversification of community generation portfolio and facilitate clean energy development as part of its system benefits. AEA has identified battery and storage as a critical success factor for integration into existing and improved systems. Techno-economic analysis will accompany this integration, to ensure efficacy of operations for both transmission and distribution within these isolated systems.

Principles: AEA is committed to lowering the cost of power in Alaska, an equity-driven approach includes principles of ensuring stronger access to economic and environmental benefits to disadvantaged communities. This project will rely on extensive partner and stakeholder engagement to coalesce around program goals and objectives, and to deliver projects that are consistent with equity and environmental justice. AEA recognizes the need for partnerships that enhance reliability, all-hazards resilience, and efficiency of the electric grid.

Objectives: AEA's project objectives are to reduce vulnerability, increase resilience, lower carbon emissions, decrease power costs, and improve public health and safety. These objectives are consistent with the FOA's goals to advance community benefits, which align with the State's energy policy goal to reach 50% renewable energy by 2025. At the same time, AEA will catalyze private sector and non-federal public capital, by contributing 50% of the overall project funding through state funds. Projects will be developed at-scale by identifying locations where significant economic benefits can be obtained, including those that reduce the transactional costs for local businesses.

Relevance of Project to Goals and Objectives of the FOA: This project aligns well with the goals and objectives of DOE – more than 200 communities in Alaska rely on rural micro-grids for their life, health, and safety. AEA has created an innovative, climate-responsive, and equitable approach to delivering improved energy outcomes for disadvantaged communities. Projects that are funded through AEA will easily interconnect to new clean energy, improve system cost-effectiveness, and increase reliability. This project meets the FOA's identified outcome to increase supply of a geographically and technologically diverse sets of location-constrained energy resources to enhance resource adequacy and reduce correlated generation outages. DOE identifies the need to consider all the opportunities that the BIL provides, and AEA will work through AML to connect projects with other federal investment opportunities, thereby maximizing and leveraging the whole-of-government approach that has been constructed. 98% of the communities AEA works with on a daily basis are disadvantaged communities. This project will more than double DOE's goal in meeting Executive Order 14008 to deliver 40% of the overall benefits of federal investments to disadvantaged communities.

Potential for Deployment of the Project to meet relevant performance targets: This project would provide a robust and repeatable model that other states and territories could duplicate (including within Hawaii, US Territories, and Tribal Communities). AEA will incentivize utilities and private sector development that harden systems and advance innovative solutions to enhance system resilience. Projects will be required to address in their merit criteria the potential for future investments by industry, communities, and private capital. AEA will work with the Alaska Industrial Development and Export Authority (AIDEA) to evaluate this criteria and identify additional investment partners, which will be part of a replicable model.

Expected Outcomes of the Project: This project will strengthen the nation's energy prosperity, implementing proven energy technologies that help to meet climate goals while delivering

community benefits that include planning and implementation that is inclusive of labor and communities, equitable approaches to workforce and business development, and lowers costs and emissions for disadvantaged communities. Expected outcomes of this project are fundamentally improved grid and community resilience.

Feasibility

Technical Feasibility of the Proposed Technology: Alaska has the potential for some of the most significant transformation from diesel power generation to renewables in the nation, and already has communities that have taken these steps. While overall adoption is high and the EIA identifies 33% of Alaska’s electricity generation comes from renewable sources, the isolated nature of its microgrids makes transformation a community-by-community effort. Funded projects under this award will use technology that has been deployed with success in Alaska, with proven innovation that is adapted to remote, isolated systems that face challenging weather and operational extremes. The following section describes renewables that are applicable to and proven for rural microgrids, battery systems that complement their use, and integration expertise that has been demonstrated by project partners.

Hydroelectric - Between 2010 and 2020, hydroelectric projects represented nearly half of renewable energy project investment in Alaska. Hydroelectric projects such as Blue Lake in Sitka, Allison Creek in Valdez, and expansion of AEA-owned Bradley Lake in Homer were among the largest projects in Alaska in terms of construction cost and generation capacity. The state also saw projects that used “lake tap” infrastructure requiring no dam and “run-of-river” hydro.

Wind - Over the past decade, wind projects represented 35% of investment in renewables. Large wind projects developed between 2010 and 2020 include Eva Creek in Healy, Fire Island in Anchorage, Phase II of Kodiak’s Pillar Mountain development, and the Snake River project in Nome. Many wind projects developed over the past decade contributed to Alaska’s role as a leader in implementing wind-diesel hybrid systems. Investments in wind-diesel hybrid systems in rural communities included efforts such as Chaninik Wind Group’s project, which incorporated thermal stoves for residential heating using excess wind generation. Enhancements in energy storage provided opportunity for further investment.

Solar - Solar projects accounted for 2% of investment in Alaska in renewable energy between 2010 and 2020, including the state’s first utility-scale solar farms constructed in Healy and Willow. Solar generation in the spring and fall is often impressive in northern latitudes where clear skies, cool temperatures, dry air and bright, reflective snow all support solar generation. Solar photovoltaic systems can actually exceed their rated output during these times of year. The Native Village of Hughes recently installed a 120 kW solar photovoltaic system. The project is being developed to help advance the community’s renewable energy goal of 50 percent by 2025. When the project is completed, it will be the largest solar project in a small rural community in the state.

Battery Storage - Residents need a reliable supply of electricity because many residents live in remote areas and winter temperatures can fall as low as minus 50 °F. Backup power therefore has to be available in the event of an outage. Utilities such as Golden Valley Electric and Homer Electric have chosen a battery backup solution as a cost-effective and reduced carbon emission solution, and implemented design and controls engineering for the whole system. In Fairbanks, the prime function of the BESS is to provide spinning reserve. At the end of the spinning reserve sequence, the BESS will automatically re-establish the operation mode, which was active prior

to the event. In Homer, the new battery energy storage system will be used to balance system demands with its greater ability to deliver or receive energy. This also allows base-loaded thermal units to be run more efficiently while allowing for increased integration of utility scale non-dispatchable renewable energy sources (i.e., wind & solar).

The rural application is demonstrated, as well. Private companies have successfully deployed a [hybrid solar + storage microgrid](#)² to support the residents of Shungnak, a remote community above the Arctic Circle in Alaska. Funded by the United States Department of Agriculture (USDA) and Northwest Arctic Borough (NWAB) the microgrid was designed to address the numerous challenges of operating in extreme conditions and break the community’s dependence on its expensive and polluting diesel generator power plant. The microgrid’s 225-kW solar array is able to offset much of Shungnak’s energy needs, while battery systems each store excess energy for later use. Uniquely designed to enable a “diesels off” operation, the system automatically coordinates between solar and energy storage to ensure lowest cost power and communicates with the utility’s power plant about the best times to turn diesel generation off. The microgrid is expected to save 25,000 gallons of fuel per year and an estimated \$200,000 per year on fuel costs, based on \$7 to \$8 per gallon calculations.

System Integration - The Alaska Village Electric Cooperative (AVEC) provides electricity to over 50 remote communities in Alaska, including several with wind or solar power. In 2018, AVEC installed a 900-kW wind turbine in St. Mary’s. They connected the two villages with an intertie in 2019, enabling them to share power. Combined, their peak electric load is 1000kW, allowing the 900-kW wind turbine to produce power greater than their electric load. This would enable diesels-off operation if there was another source of regulation and spinning reserves. AVEC identified this need and came up with the concept of a Grid Bridging System (GBS) that would provide regulation and spinning reserves. AVEC worked with ACEP to identify technical specifications for the GBS as well as ideal energy storage technologies that would fit the need. The GBS requires a high-power capacity, the ability to supply a lot of power, but for a short period of time, a minimum of around 10 minutes. Therefore, a high-power and low-energy capacity system is needed. The team came up with three systems: 1) Ultracapacitor energy storage systems, 2) Lithium Titanium Oxide (LTO) batteries, and 3) Lithium Iron Phosphate (LFP) batteries.

Capability of Achieving Anticipated Performance Targets: AEA actively solicits and monitors community power generating status, current deficiencies, inventory of equipment, and assesses possible future need. This information is stored and maintained within AEA’s Powerhouse Assessment Dashboard. This live and current information can be reviewed and refined by AEA in order to select the best projects for community microgrid transformation, and to monitor and achieve anticipated performance targets. Figure 3 provides a demonstration of this tool, for one community.

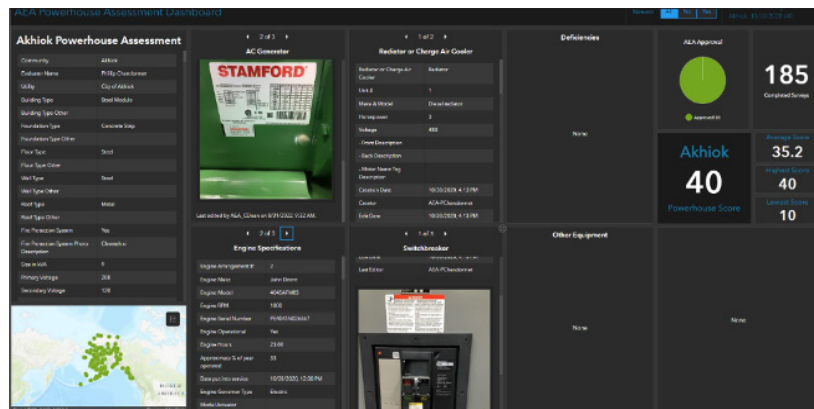


Figure 3: Community Inventory and Assessment Database.

Description of Previous Work and Prior Results: Between 2008 and 2022 the state legislature appropriated \$300 million for Renewable Energy Fund (REF) grants, that are managed by AEA. Those state monies leveraged approximately \$250 million in private and federal funds to complete project funding. The REF is managed by AEA in coordination with a nine-member REF Advisory Committee. The program provides grant funding for the development of qualifying and competitively selected renewable energy projects. Since its inception 271 REF grants have been awarded and funded via legislative appropriations totaling \$300 million. These funds have been matched by local and private contributions that have leveraged AEA's investment. Over 100 operating projects have been built with REF contributions, collectively saving more than 30 million gallons of diesel each year. These investments have resulted in the reduction of 266,610 metric tons of carbon equivalent. At one point, Alaska was investing more per capita in renewable energy than any other state. AEA has identified nearly a dozen projects that have the engineering and planning already in place to move quickly into construction, if funded. AEA is an active participant and project manager in many of the projects. The completed studies have shown that many of the projects are viable and ready for implementation.

A highlight of AEA's program success is the implementation of the integrated wind-hydro-power-diesel system at [Pillar Mountain](#), which provides the residents of Kodiak Island, the second-largest island in the U.S., with almost 100% renewable and reliable energy.

Winner of the Department of Energy and the National

Rural Electric Cooperative Association's Wind Cooperative of the Year Award, the project is a model for advancing wind power in remote areas. This project was funded through AEA. In figure 3, AEA provides a noteworthy example of a successful hydro project in Southeast Alaska.

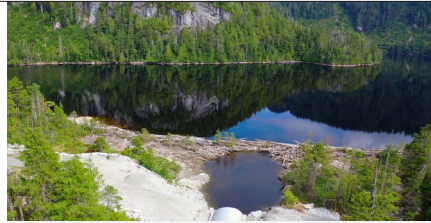
SUCCESS STORY	
Hiilangaay Hydroelectric Project - Financed by REF and PPF, the Hiilangaay Hydroelectric Project is a small dam constructed on Melon Lake near Hydaburg on Prince of Wales Island. - Commissioned in January 2020, Hiilangaay is providing 100% clean renewable energy and has already displaced more than 110,000 gallons of costly imported diesel the isolated communities use for electrical generation. - Haida Energy sells the output from its 5-megawatt (MW) turbines to Alaska Power & Telephone for distribution across Prince of Wales Island.	 Location: Hydaburg, Prince of Wales Island Total Project Cost: \$31,300,000 REF: \$4,000,000 PPF Loan: \$19,130,000 Capacity: 5 MW Borrower: Haida Energy

Figure 4: Example of project success.

Access to Necessary Infrastructure: Every community is unique, but has access to locally sourced potential renewable energy solutions. AEA has identified a diverse generation mix in all communities. The majority of off-grid communities rely on barge service to deliver fuel, supplies, and larger construction materials, while air travel provides year-round access for passengers, cargo, and services. Essentially, the transportation system is critical to deliver projects, but the high cost and logistics must be managed effectively to ensure the timeliness of project delivery. Current micro-grid systems have distribution in place, serving residents in communities large (10,000) and small (38). AEA and partners have delivered projects in every community in Alaska and understand the necessary infrastructure. The assessment of necessary infrastructure would be included in project identification and scoring metrics.

Use of Existing Infrastructure: AEA anticipates utilization of existing infrastructure to the greatest extent possible, and project applicants will describe utilization of current distribution or transmission infrastructure. Current infrastructure includes utilities and operators, and AEA will

prioritize projects that invest into current workforce and power system operators. Independent power producers must demonstrate collaboration and partnership with existing utility owners.

Access to Skilled Workforce: Alaska’s utilities are experienced operators of power systems that experience challenging conditions. The local and regional workforce is skilled, and regularly provided training opportunities. In partnership with the Alaska Vocational and Technical school (AVTEC) AEA offers the Power Plant Operator training program that includes engine maintenance, troubleshooting and theory, electrical systems and generators, introduction to electrical distribution systems, diesel electric set operation, control panels, paralleling generator sets, load management, fuel management, waste heat recovery, plant management, and power plant safety. As part of this program, AEA will update course curriculum to be responsive to new and innovative system designs, and work with partners to deliver the course for project participants.

At the same time, AEA’s Circuit Rider Program³ provides eligible utilities with technical assistance to improve the efficiency, safety, and reliability of their energy infrastructure. This program helps to reduce the risk and severity of emergency conditions. The Circuit Rider program develops strong ties with the remote Alaskan communities. The power system operator ecosystem in Alaska is interdependent, with strong collaboration between the state and utilities in ensuring system operability and community health and safety.

Innovation and Impacts

As described above, this project anticipates utilizing technologies that are state-of-the-art and have been demonstrated for use in Alaska’s challenging conditions to improve rural community microgrids. Remote regions of the world such as Alaska, once viewed as disadvantaged due to a lack of conventional grid infrastructure, have proven to be fertile ground for sustainable energy innovation. This innovation flows from challenges associated with providing reliable electricity without the benefit of traditional transmission and distribution systems. Economic pressures linked to the high cost of delivering traditional fossil fuels for most energy applications in a part of the world with relatively low per capita income is also a factor and a trait Alaska shares with much of the world seeking solutions for energy access.

Alaska has long been a [pioneer in deploying high penetration renewable energy microgrids](#).⁴ These microgrid systems—some in continual operation for close to a century—built the business case for renewable energy integration well before the rest of the country, and the rest of the world, moved in this direction. When measured in terms of installed capacity, Alaska ranked No. 1 in the US as of 2021, with over 3,500 MW installed.

Renewable energy is further incentivized by a highly deregulated utility market with dozens of utilities, state investment in infrastructure in the past, and modest subsidies that create niche markets where renewable energy projects are cost-competitive. Alaska’s small and relatively constant population also translates into a market focused on serving existing customers. Innovation has been incremental but steady, moving from basic isolated diesel systems to incorporating distributed energy resources (DER) at increasing levels fueled by a continuous improvement ethos that leans toward a greater and greater uptake of renewable energy resources.

Most microgrids in Alaska are operated by local utilities, with over 100 certificated utilities active in the state, each serving a relatively small population. This stands in contrast to the

continental U.S., where most microgrids are deployed by third-parties serving critical facilities (such as military bases) and commercial and industrial customers. Cooperative utilities are the predominant model in Alaska, again a feature which aligns with much of the world's utility structures that lean toward non-profit and government entities. Utilities play a more predominant role in microgrids globally than in the U.S., especially for island nations such as the Asia Pacific. In fact, Alaska's public and rural cooperative approach to enhance regional grid resilience is an innovative feature of best practices that can be demonstrated through this project.

Innovative Analysis: AEA will team with Alaska Center for Energy and Power (ACEP) – whose mission is to develop and disseminate practical, cost-effective and innovative energy solutions for Alaska and beyond. Their innovative power system modeling and analysis is built on Alaska expertise but with emerging technologies and integration in mind. ACEP will utilize techno-economic studies, dynamic modeling, and data analytics as part of this project's approach to innovation.

- **Techno-Economic Studies** - These studies and modeling work are critical for examining reliability and affordability as electric grids and microgrids transition to increased penetrations of renewable energy resources, inverter-based resources, and distributed energy resources. This work includes techno-economic analysis, including capacity expansion and production cost modeling, where the dispatch of generators and resources in the system are determined to ensure reliability through maintaining the load and generation balance and minimize the cost to run the system.
- **Dynamical Studies** - Dynamical modeling of power systems is used to assess the stability of these systems in response to contingencies such as faults and scheduled or unplanned loss of generators or transmission lines. Dynamical modeling is performed when new generators, resources, or transmission lines are added to the system whether that be a part of near-term planned changes to the system or long-term decarbonization strategies. Traditionally, different modeling tools have been used based on the complexity or size of the system, the voltage level of the system or the area of interest, and the type of stability questions being raised. However, the proliferation of inverter-based resources (IBR) (including wind, solar and battery energy storage) and when to use which tool has raised the question of what level of detail should be included for the individual IBR models within those tools.
- **Data Analytics** - In recent years, electric power systems have become digitalized with the introduction of the smart grid concept. In this digitization, tremendous opportunities in the power industry have opened due to the emergence of multi-scale data from synchrophasors, advanced metering, weather forecasting and energy markets to dynamically learn and adaptively control a power system. Many applications such as supervisory control and data acquisition systems, state estimation, distribution energy management systems and machine learning are being employed to further the application of data-driven models in power system operation.

Innovative Permitting: AEA will partner with the Denali Commission to identify ways in which federal permitting may be streamlined, and with Alaska Department of Natural Resources Office of Project Management and Permitting, which has extensive experience in multi-jurisdictional permitting. These partnerships will result in more efficient approaches to permitting renewable energy projects in Alaska.

Overall Impact: The utilization of advanced technologies, systems of integration, and analysis will result in lower project costs, more resilient systems, and higher renewables adoption rate. This high level of innovation will maximize the reduction of carbon emissions.

Support Resilience Goals

Local/Tribal: The microgrid transformation projects would first support local community resilience, but also state resilience. The rural microgrid communities considered for this project are Tribal, and are underserved communities in need of a resilient power system. By transforming the community to clean and reliable energy, the community would be directly benefitted. This project responds to 23 [identified](#)⁵ climate action plans, adaptation plans, and impact assessments with associated response strategies. Local and Tribal governments have actively worked to develop resilience goals, including actions that reduce carbon emissions and promote renewable energy integration.

State: Alaska's State Energy Policy has a goal of 80% utilization of renewables for power production by 2040 and AEA has been limited in its ability to meet this goal due to resource constraints that have limited available funding at the State level. Leveraging federal funding will significantly overcome this hurdle, and lead to transformation that moves Alaska communities closer to this goal than otherwise possible.

National: This project contributes to the Administration's effort to address climate change and environmental justice, and the Department's goals to achieve 100% renewable energy. Development of projects that are critical to reliability and resilience of the grid has been identified as a priority by DOE under this announcement, and this project will result in outcomes that increase the supply of location-constrained energy resources to enhance resource adequacy and reduce correlated generation outages. This project will result in the decarbonization of the electricity and broader energy system in a way that supports system resilience, reliability, and affordability.

Risk Mitigation: AEA's project identification and management process responds to the challenging circumstances of rural renewables integration. AEA understands the risks of project deployment in communities where the size of power generation is very low relative to the loads in the community. Alaskan microgrids can be as small as 20 to 30 kW with 5 to 10 kW loads that cycle on and off. This results in a very unstable frequency and power factor. The small grids also suffer from very unbalanced distribution systems, which artificially increase the amount of generation required and decrease overall efficiency. This phenomenon is common in rural Alaska. Risk mitigation will evaluate these concerns relative to the fact that nearly all of the hardware designed to support renewable generation is designed for grid operations elsewhere in the nation. By AEA pioneering the technology needed for stable microgrid operations, future microgrids in other locations of the United States and territories could be serviced accordingly.

Since all these projects will be islanded microgrids, it will be necessary to balance load with energy creation. All load demand and power creation will be designed for a balanced operation, mitigating the event of a microgrid failure. In addition, community building systems, distribution systems, and energy storage will all be heavily involved with these community microgrid upgrades. Specifically, excess energy production has great benefit for affected communities.

Excess energy can be used for heat recovery systems, electric boilers, electric heaters, battery storage, and stored water. This holistic approach will ensure that projects are carefully selected and designed such that they produce a reliable microgrid for the affected community. AEA will evaluate and implement these processes throughout the project's life-cycle.

The innovative technology risk reduction would be accomplished by Alaska leveraging renewable, microgrid integration expertise. There are cooperative utilities operating within the state such as Alaska Village Electric Cooperative (AVEC) that already have experience with integrating renewables into microgrids. These partners' resources pooled together with the experience housed at AEA will reduce project risk, along with creating a vetted template that can be scalable amongst other communities as funding allows.

AEA's experience managing the \$300 million REF program indicates that this project has the potential to leverage approximately 50% more funding from local and private sources. Local contributions to REF projects exceeded the State's contribution. AEA will team with the Alaska Industrial Development and Export Authority, with the mission to promote, develop, and advance general prosperity and economic welfare of the people of Alaska, to facilitate the ability for projects to secure additional public and/or private investment.

Workplan

Project Objectives: The project's goals, outcomes, and objectives are multi-faceted and align with the Department's and Administration's priorities.

Goal 1: Lower the costs of energy in rural, disadvantaged communities.

- Objective 1.1 – Deliver projects that reduce the cost per kwh by more than 10%.
- Objective 1.2 -Deliver projects that lower maintenance and operations costs.

Goal 2: Reduce greenhouse gas emissions of microgrid systems.

- Objective 2.1 – Deliver projects that leverage locally sourced renewables, including wind, solar, and hydro.
- Objective 2.2 – Deliver projects that lower the diesel fuel use by 50% or more.

Goal 3: Deploy solutions that leverage process, financial, and technology innovation.

- Objective 3.1 – Deliver projects in collaboration with project partners, utilizing broad technical, economic, financial, and project management expertise.
- Objective 3.2 – Deliver projects in ways that maximize stakeholder engagement, workforce development, and community benefits.

Outcomes

1. Resilience – This project will result in rural community microgrids that deliver more stable, cost-effective, renewable power to residents.
2. Equity – This project will result in improved public health and economic benefits that will accrue to disadvantaged communities.
3. Climate Change – This project will lower Alaska's carbon footprint and contribute to mitigating climate change.

Buy America Requirements: AEA recognizes that the project will involve the construction, alteration, maintenance and/or repair of public infrastructure in the United States and that Buy America Build America (BABA) requirements apply. AEA will ensure that sub-awardees comply

with BABA and/or have the necessary waivers in place, limited as they are. AEA understands the challenging landscape within which projects must be conducted, including timelines and environmental considerations in Alaska, at the end of the supply chain, and will comply with BABA, as well as all other federal requirements.

Technical Scope Summary: The project’s work scope is divided into performance periods that are discrete annual decision points based on the State of Alaska’s fiscal year, with the first year adjusting for project award.

Performance Period 1: FY24

1. Summary of Work – This first year of the project will focus on finalizing planning and strategic development of the partnerships and program delivery, which include robust stakeholder engagement and public outreach. Program requirements will be structured similar to AEA’s REF, which has a grant review team and process that will efficiently review projects based on merit criteria that corresponds to GRIP priorities and AEA’s goals.
2. End Result – Program fully developed, ready for a request for applications.
3. Decision Point – AEA will evaluate project contributions to meeting goals of carbon and cost reduction, and available non-federal match.
4. Community Benefits Plan Milestone – AEA will complete its teaming agreement with AML, and finalize the project components that include equity assessment, labor engagement, and implement a skills and workforce development strategy.

Performance Period 2: FY25-FY29

1. Summary of Work – The program will be released for application and projects will be identified per the requirements. AEA expects to make approximately twenty sub-awards for transformative projects. The project partners will implement a project development support process, to provide grantees with necessary technical assistance, and develop a cohort approach to project management.
2. End Result – Grant sub-awards completed to approximately twenty rural communities.
3. Decision Point - AEA will evaluate project contributions to meeting goals of carbon and cost reduction, and available non-federal match.
4. Community Benefits Plan Milestone – AEA will complete community benefit assessments and agreements in each project community, in collaboration with grantee and partners.

Performance Period 3: FY30

1. Summary of Work – Project awards will be reviewed based on annual monitoring, and project close-outs. Partners will hold a workshop with all awardees to determine strengths and weaknesses of the program, and to finalize analysis of goals, objectives, and outcomes.
2. End Result – Approximately twenty communities will have had projects implemented and finalized, with expected objectives achieved.
3. Decision Point – Final reporting will satisfy the terms of the agreement with DOE.
4. Community Benefits Plan Milestone – The project team will report on equitable benefits delivered to communities, as well as environmental justice and climate change metrics that demonstrate outcome delivery.

WBS and Task Description Summary:

Workplan/Task/ Sub-Task	Description
Y1 Workplan	Formational activities focused on partnerships, stakeholders, and process
Task 1.1	Partnership team roles and responsibilities finalized, project scoping
Sub-task 1.1.1	Finalize all partner agreements and project scope
Task 1.2	Stakeholder engagement and outreach
Sub-task 1.2.1	Conduct outreach to disadvantaged, rural communities
Sub-task 1.2.2	Initiate targeted application support for known projects
Task 1.3	Application development and review process
Sub-task 1.3.1	Criteria and metrics developed for evaluating project benefits
Sub-task 1.3.2	Review program for merit and finalize request for application
Y2 - Y6 Workplan	Project development and community benefit support activities
Task 2.1	Conduct request for applications
Sub-task 2.1.1	Review and award high scoring projects
Task 2.2	Cohort development and community benefit agreements
Sub-task 2.2.1	Bring project grantees together as part of cohort, with quarterly technical support
Sub-task 2.2.2	Work with communities on equitable project benefits
Task 2.3	Initiate project development and NEPA process
Sub-task 2.3.1	Work with communities on proper NEPA documentation, final engineering design and permitting
Sub-task 2.3.2	Conduct project financing review for leveraged funding
Y7 Workplan	Project evaluation and analysis of outcomes
Task 7.1	Finalize all project awards and activities
Sub-task 7.1.1	Ensure completion of all projects and finalize reporting
Task 7.2	Review impact of projects on goals and outcomes
Sub-task 7.2.1	Partners review goals, objectives, and outcomes against project reporting
Sub-task 7.2.2	Evaluate community benefit arrangements and impact
Task 7.3	Produce final summary of findings
Sub-task 7.3.1	Share findings on project website and in public forums
Sub-task 7.3.2	Share findings with project grantee, participating and rural communities

Figure 5 provides existing and potentially viable projects.

	Type of Project	Cost of Energy \$/kWh	"Anticipated Annual Gallons of Diesel Fuel Offset by Proposed Project"	Project Status
Village	Hydro	\$0.61	115,000	Ready for Construction
Village	Hydro	\$0.61	20,000	Feasibility Study Complete
Connects Multiple Villages	Hydro	\$0.45	1,558,033	Concept Design, and FERC Permitting
Village	Hydro	\$0.80	40,000	Partially Constructed
Village	Hydro	\$0.68	130,000	Ready for Construction
Village	Hydro	\$0.70	37,000	Ready for Construction
Village	Wind/Solar/Battery	\$0.38	2,448,293	Concept
Multiple Individual Villages	Solar/Battery	\$0.75	80,000	Concept on per village basis (10 total)
Multiple Individual Villages	Wind/Battery	\$0.75	80,000	Concept on per village basis (10 total)
Village	Hydro	\$0.65	20,138	Ready for Construction
Connects 2 Villages	Hydro	\$0.66	16,014	Concept
Village Wind Expansion	Wind/Battery	\$0.37	400,000	Ready for Construction
Connects 2 Villages	Wind & Electric Boiler	\$0.52	165,000	Design and Permitting
Connects 2 Villages	Wind/Battery	\$0.60	270,000	Ready for Construction

Milestone Summary:

Quarter	Milestone	Measure	Verification
1	Partners establish teaming agreements.	Progress	Document
2, 3	Program developed	Progress	Announcement
4	Program released, request for applications	Progress	Applications
5	Community benefit agreements in place.	Progress	Document
6, 7	Applications received and evaluated for merit criteria.	Progress	Applications
8	Approximately twenty community awards result in project implementation.	Technical	Agreement
9 - 24	Projects are implemented	Technical	Document
10	Outreach conducted.	Progress	Announcement
13	Survey and interview results received and reviewed.	Progress	90% response
14	Stakeholder listening session conducted.	Progress	Workshop held
15	Cohort evaluation finalized.	Progress	90% response
16	Preliminary review of findings is released by the project team.	Technical	Document
25	Survey and interview results received and reviewed.	Progress	80% response
26	Stakeholder listening session conducted.	Progress	Workshop held
27	Cohort evaluation finalized.	Progress	80% response
28	Project delivers summary of outcomes to DOE.	Technical	Document

Go/No-Go Decision Points

The following summary of project-wide Go/No-Go decision points includes decision points and objective criteria by budget period, which are described more fully in the SOPO.

Period	Decision Point	Objective Criteria
FY24	Program developed	Request for Applications with feasible, impactful project selection criteria developed.
FY25	Approximately 20 projects funded	Signed project agreements with 20 communities.
FY26	Project development	Projects that have cleared progress criteria with completed feasibility reports are moved forward.
FY27	Project construction	Projects that have cleared progress criteria with completed design and permitting are moved forward.
FY28	Project construction	Projects that have cleared progress criteria with groundbreaking construction are moved forward.
FY29	Project construction	Projects that have cleared progress criteria and are on budget and on schedule are moved forward.

End of Project Goal:

Goal 1: Lower the costs of energy in rural, disadvantaged communities.

- The project will result in reduced power costs of at least 10% in 20 rural, disadvantaged communities.

Goal 2: Reduce greenhouse gas emissions of microgrid systems.

- The project will result in the reduced use of imported diesel (by at least 50%) and increased use of locally sourced renewables, for an overall carbon reduction.

Goal 3: Deploy solutions that leverage process, financial, and technology innovation.

- Project partners will deliver innovative approaches to project delivery that include process management, leveraging of financial capital, and technology that responds to Alaska's challenging circumstances.

Project Schedule:

(See following page)



Tenakee Springs, Alaska.

Work plan	Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	21	23	24	25	26	27	28
Y1 Workplan	Formational activities																												
Task 1.1	Partners finalized																												
Sub-task 1.1.1	Partner agreements																												
Task 1.2	Stakeholder engagement																												
Sub-task 1.2.1	Outreach to communities																												
Sub-task 1.2.2	Targeted applications																												
Task 1.3	Application development and review process																												
Sub-task 1.3.1	Criteria and metrics developed																												
Sub-task 1.3.2	Review program, request for applications																												
Milestones reached																													
Go/No-Go Decision	Program ready for release																												
Y2- 6 Workplan	Project development and community benefit																												
Task 2.1	Conduct request for applications																												
Sub-task 2.1.1	Review and award																												
Task 2.2	Cohort development and benefits																												
Sub-task 2.2.1	Cohort established for TA																												
Sub-task 2.2.2	Community benefit agreements																												
Sub-task 2.2.3	Cohort working group meeting																												
Task 2.3	Project development																												
Sub-task 2.3.1	TA to unawarded applicants																												
Sub-task 2.3.2	Project financing review																												
Milestones reached																													
Go/No-Go Decision	Projects funded																												
Y7 Workplan	Project evaluation and analysis of outcomes																												
Task 7.1	Finalize project awards and activities																												
Sub-task 7.1.1	Ensure completion of projects																												
Task 7.2	Review impact																												
Sub-task 7.2.1	Partners assess goals and outcomes																												
Sub-task 7.2.2	Evaluate community benefits																												
Task 7.3	Produce findings																												
Sub-task 7.3.1	Share on website and publicly																												
Sub-task 7.3.2	Share with project sponsors and communities																												
Milestones reached																													
Go/No-Go Decision	Evaluation finalized																												

Project Management:

Overall approach to and organization for managing the work: AEA will aggressively manage the project to ensure consistency of the interrelated community-level projects contributing to the proposed outcomes of the overall effort. AEA will maintain frequent communication with stakeholders through all stages of the project and establish project support infrastructure to ensure success. AEA will enforce appropriate standard project management practices and processes, and control for performance, scope, and budget. AEA will be responsible for initiation, reporting, monitoring and measuring project outcomes, and project close-out. AEA will work with the following partners (described further below) to implement this program and support community benefits:

- Alaska Municipal League (AML) – membership includes all local governments in Alaska
- Alaska Native Tribal Health Consortium (ANTHC) – provides project planning and energy deployment to Alaska’s Tribal communities.
- Alaska Center for Energy and Power (ACEP) – conducts techno-economic analysis for rural micro-grid project feasibility.

The roles of each project team member: AEA will be responsible for program management, implementation, and reporting, as well as partner and stakeholder engagement. Additional roles have the following responsibilities performed by diverse team members:

- Project development and identification – AEA will work with ACEP and ANTHC to identify feasible projects and to provide technical assistance to projects in need of development.
- Stakeholder engagement – AEA will work with AML to develop a stakeholder engagement strategy that focuses on rural, disadvantaged communities and includes municipal and Tribal governments, and public and cooperative utilities.
- Application support – AML will provide application support for project grantees, to overcome capacity barriers that might exist in disadvantaged communities.
- Project review and analysis – AEA will convene a project review board comprised of project partners and technical experts to review projects for feasibility and impact.
- Innovative financing – AEA will work with AIDEA to develop and implement a process of private and public capital mobilization in support of project delivery.
- Project deployment and support – AEA will work with Denali Commission and ANTHC on effective ways to support project implementation, including through procurement and project management support.
- Project evaluation – AEA will annually convene project partners to conduct a thorough analysis of projects both for their technical merit and community benefits. This will be a dedicated effort in year four of the project.
- Reporting and compliance – AEA will expect quarterly reporting from all sub-awardees, and provide technical assistance through ANTHC and AML to ensure compliance.

Any critical handoffs/interdependencies among project team members: There are multiple stages at which critical handoffs and interdependencies occur.

- Project selection – Project team members will be involved in soliciting and identifying projects, reviewing projects for greatest feasibility and impact, and selecting awards.
- Project management – Project team members will establish working relationships with project proponents, and include technical assistance activities as part of project management, including workforce development, modeling and analysis, and project implementation support.
- Benefits tracking – Project team members will work with recipients to establish systems to track technical and community benefits, which will include avoided diesel use, cost savings, and local and Tribal benefits.

The technical and management aspects of the management plan, including systems and practices, such as financial and project management practices: AEA is the State’s primary agency responsible for lowering the cost of energy in Alaska. AEA has experienced staff and management systems in place to administer this microgrid transformation, and the overall program management. AEA has a full suite of highly qualified individuals, and a strong system of internal controls in place that facilitates meeting all compliance requirements. AEA’s financial and project management capabilities are demonstrated by receipt of unqualified audit opinions for both our annual Financial Statements and Federal Single Audit report, located on AEA’s website. AEA provides grants and loans for qualified energy infrastructure projects and owns energy infrastructure for the benefit of Alaskans. AEA has the legal authority to enter into a financial assistance relationship with the U.S. Department of Energy, and is experienced with managing federal awards, including most recently the National Electric Vehicle Infrastructure (NEVI) deployment, an award of \$52 million. Additionally, as an authority of the State, AEA produces an annual financial report.

The approach to project risk management: AEA will proactively manage project risk through continuous risk identification, evaluation, mitigation, monitoring, and measurement. Risks will be registered to track issues identified and analyzed to examine how project outcomes might change due to the impact of the event. The project team will develop plans to reduce or manage the impacts of the risk, as it is identified. Identified risks will be monitored for any necessary reassessments, including trigger conditions and criticality. The risk management process will be internally audited to determine the accuracy of the identification, severity, and impact of the event.

Plan for securing a qualified workforce and mitigating risks to project performance including but not limited to community or labor disputes: The project team will go through a process of strategic workforce planning that includes an understanding of demographic changes, cost reductions, talent management, and flexibility. The project is responsive to current conditions, where a qualified workforce is critical for project delivery, but the availability of skilled workers has been reduced. AEA and partners will work with project proponents to design workforce strategies that limit vacancies and overstaffing, ensure critical competencies, include cost efficiency that is manageable, and maintain a workforce that is agile, resilient, and flexible. The project’s Community Benefits Plan outlines ways in which the project will work with and through Alaska’s labor ecosystem to strengthen workforce performance and mitigate disputes. This includes provisions that maximize local labor and competitive wages.

A description of how project changes will be handled: Project changes will be managed with a systematic process for requesting, logging, evaluating, and approving (or denying) scope, schedule, and budget changes requested during the project according to the table on the following page.

Overall Project Management and Planning (All Budget Periods)

The recipient will perform project management activities to include project planning and control, financial management, data management, management of supplies and/or equipment, risk management, and reporting as required to successfully achieve the overall objectives of the project.

Task 0.0 – Project Management and Planning: The Recipient shall develop and maintain the Project Management Plan (PMP). The content, organization, and requirements for revision of the PMP are identified in the Federal Assistance Reporting Checklist and Instructions. AEA will manage and implement the project in accordance with the PMP. The PMP shall be revised and resubmitted as often as necessary, during the course of the project, to capture any major/significant changes to the planned approach, budget, key personnel, major resources, etc.

Task 0.1- Kick-Off Meeting: AEA will participate in a project kickoff meeting with the DOE within 30 days of project initiation.

Responsible	Process Step	Description
Requestor	1. Identify need for change.	Submit complete change request form to the project manager.
Project Manager	2. Log change in change request log.	Maintain log of all submitted change requests throughout the project's lifecycle.
Project Manager, Team, Requestor	3. Evaluate change.	Conduct preliminary analysis of potential impact of each change to risk, scope, schedule, and cost. Seek clarification as needed from team and change requestor.
Project Manager	4. Submit change request to AEA.	Submit change request and preliminary analysis to AEA for review.
AEA	5. Make final decision to approve or deny change request.	Discuss proposed change and decide whether it will be approved based on all submitted information.
Project Manager	6. Communicate decision.	Communicate decision to requestor, team members, and stakeholders.
Project Manager	7. Implement change.	If change is approved by AEA, update and re-baseline project documentation as necessary.

Approach to Quality Assurance/Control: AEA will establish a customized quality management plan to assure quality standards and processes are agreed upon and followed. Key project quality measurements will be identified and defined, responsibilities will be assigned to appropriate staff and partners, and a checklist will be created to ensure the plan has been implemented.

Maintaining communications among project team members: Internal communications strategies and tactics will be organized by type, frequency, and audience to ensure relevant information is shared with appropriate stakeholders based on their roles and responsibilities, as described below.

Type	Method	Frequency	Purpose	Lead	Audience
Audience: Internal Project Team Only					
Project Update	Meeting	Daily	Discuss project status and any immediate issues.	Project manager	Internal project team
Task Update	Project management software	Daily	Provide daily progress on assigned tasks.	Project manager	Internal project team
Audience: Internal Project Team, PMO and Project Grantee					
Project Review	Meeting	At scheduled milestones	Evaluate deliverables, discuss next steps.	Project manager	Internal project team, and project grantee
Project evaluation	Meeting	At project conclusion	Reflect on project performance and identify lessons learned.	Project manager	Internal project team, and project grantee
Project Status	Project management software	Weekly	Provide updates on project status and highlight any issues, challenges, problems, decisions and/or changes.	Project manager	Internal project team, and project grantee

Technical Qualifications and Resources

Project team's unique qualifications and expertise, including those of key sub-recipients.

AEA is an independent and public corporation of the State of Alaska, est. 1976. AEA is governed by a board of directors with the mission to “reduce the cost of energy in Alaska.” AEA is the State Energy Office and lead agency for statewide energy policy and program development. Whether building modern and code-compliant bulk fuel tank farms, upgrading to high-efficiency generators in rural powerhouse systems, or integrating renewable energy projects, AEA emphasizes community-based project management. AEA's core programs work to diversify energy Alaska's energy portfolio, lead energy planning and policy, invest in Alaska's energy infrastructure, and provide rural Alaska with technical and community assistance.

AEA has more than thirty-five professionals on staff, including but not limited to engineers, planners, project developers, project managers, accountants and finance officers, and policy analysts. As the state's designated energy office, AEA has managed billions of dollars in federal, state, and private funds to plan and build infrastructure in urban and rural Alaska. AEA's building is located conveniently in Anchorage with adequate technology, spacing, and facilitation equipment. AEA has capabilities for video conferencing, hosting meetings, and a team for procuring services and materials.

AEA staff have worked with stakeholders in nearly every community in the state to deliver critical supply and demand energy services. Critical relationships and partnerships are in place with the vast array of Alaska energy stakeholders that includes small rural non-profits and utilities, large regional and village Alaska Native Corporations and tribal governments, conservation organizations, municipal governments, and technology- or solution-oriented working groups. AEA has a strong capacity to conceptualize, implement, and successfully complete supply and demand energy projects. This is accomplished through an outcomes-focused process that leads to a coordinated, statewide approach to overcoming barriers and building new and improved energy infrastructure for rural Alaska communities. Such knowledge, capacity, and established working relationships with stakeholders, positions AEA and its partners to lead a coordinated joint team that will overcome barriers to implement the Rural Alaska Microgrid Transformation project.

AEA has the experience, expertise, equipment, and staff ready to achieve the project objectives set out in this opportunity. The Alaska Energy Authority has a whole team of staff specifically designated for grants, compliance, procurement, contracting, and finance. Each of these teams have adequate resources to ensure the project is on budget and on schedule.

AEA is engaged in all levels of consumer energy from project and resource identification, appropriate design, and to financing and maintenance. Over decades of experience developing energy projects in Alaska, AEA has continuously improved on process, application of technology, and delivery of service. AEA integrates energy technology and advances in grid services into all program areas both on the supply- and demand-side.

AEA (as owner of significant generation and transmission assets in the Railbelt region of Alaska, and in furtherance of its mission to reduce the cost of energy in the State) plays an important role in ensuring that sound public policy and energy planning initiatives within the region maximize the potential benefits to the broadest group of stakeholders. Without a specific certificated area, and as owners of assets which cross multiple jurisdictional boundaries, AEA is uniquely

positioned to facilitate discussions amongst stakeholder groups and find solutions for the region in its entirety. AEA does so through its leadership role on the management committees associated with its assets.

Project team’s existing equipment and facilities

AEA’s project team has all necessary equipment and facilities from which to manage this project. This includes office space located in Anchorage, Fairbanks, and Juneau. ACEP has a testing facility in Fairbanks that may be used to evaluate the combination of technologies employed by rural microgrids.

AEA will identify existing equipment and facilities at the site of projects that receive funding within the scope of this program. Applications will include criteria for identification of these assets and ways in which they will facilitate the successful completion of the proposed project. The application will also be required to justify any new equipment or facilities.

Relevant, previous work efforts, and demonstrated innovations

AEA manages the Renewable Energy Fund, the Rural Power System Upgrade Program, the Power Cost Equalization Program, and various Energy Efficiency and Conservation Programs.

AEA has been at the forefront of supporting technology and process improvements that move Alaska communities toward renewable integration within existing power systems. AEA has managed both its Renewable Energy Fund and Emerging Technology Fund since 2008, and programs like Power Cost Equalization since 1985. AEA annually reviews the potential for microgrid projects to lower costs and reduce diesel consumption, including through the use of renewables. In addition to advancing renewable energy production for disadvantaged communities, AEA has experience with improving, upgrading, and building out rural microgrids, including through:

- Renewable power generation creation and system integration (hydro, wind, or solar)
- Modern distribution systems and controls
- Battery Energy Storage Systems (BESS)
- Modern and emission efficient diesel back-up powerhouse systems
- SCADA controls between renewables and diesel back-ups

AEA has successfully managed and completed over three-hundred grants in the last decade from many different agencies as well as private funds from the Volkswagen Settlement and Wells Fargo. AEA was a successful applicant to the BUILD program in 2020 for the Alaska Cargo and Cold Storage Project. In 2022, the Department of Defense awarded AEA over \$12 million to extend power to the Black Rapids training site near Delta Junction.

AEA has thirty active awards from the Denali Commission, AEA’s current federal cognizant agency. These awards touch on every aspect of what the agency does. There are awards for design and construction of Rural Power System Upgrades (RPSU) and Bulk Fuel Upgrades (BFU); small renewable projects that will be integrated into a remote diesel power system; energy efficiency upgrades, Utility Clerk, Powerhouse Operator, and Bulk Fuel Operator training; small maintenance and improvements for both power systems and tank farms; as well as circuit rider technical assistance and on-site training.

This wide array of current and past programs, and grant management experience, ensures that AEA is appropriately prepared to manage this project, including a sub-award and project delivery and assessment process.

Time commitment of the key team members to support the project.

Business Point of Contact: Curtis Thayer serves as executive director of the Alaska Energy Authority (AEA), the state's energy office and lead agency for statewide energy policy and program development. Previously, he was the commissioner for the Department of Administration and cabinet member for Governor Sean Parnell, responsible for 1,100 public employees and an annual budget of \$350 million. As part of his public service, he served as the deputy commissioner of the Department of Commerce, Community, and Economic Development, and worked in Washington, D.C. with Alaska's Congressional Delegation. A graduate of the United States Department of Energy's National Renewable Energy Laboratory Executive Energy Leadership Institute program, Thayer has gained a comprehensive understanding of advanced energy technologies that has helped him guide his organizations in making energy-related decisions. The project budget and work plan anticipate 10% of Thayer's time committed to the project.

Tim Sandstrom is AEA's Chief Operating Officer and will represent Mr. Thayer in directly overseeing the rural energy team. He has been with AEA since 2011 and previously served as director of rural programs. Sandstrom oversees the management of AEA's Rural Power System Upgrade, Bulk Fuel Upgrade, Circuit Rider, Emergency Response, and Training Programs. As a member of the senior management team, he is also responsible for the implementation of AEA's strategy and budget management for his programs. With over 35 years in construction, project management, and engineering project management throughout Alaska, Sandstrom brings a broad range of private sector experience to his work. The project budget and work plan anticipate 10% of Sandstrom's time committed to the project.

Technical Point of Contact: Rebecca Garrett, Rural Programs Manager, has been with Alaska Energy Authority since 1997 and has managed projects and programs in varying size and complexity since 1998. She earned her project management professional (PMP) certification and keeps an active registration. She will take on the day-to-day administration of this award starting by preparing the Project Management Plan. From there she will assign individual projects to qualified project managers who will provide project oversight, review and accept plans, procedures, deliverables and reports. Ms. Garrett will be responsible for project communications between contractors, consultants and the AEA team. She will track specific contractual deliverables against the schedule to ensure contractors are on track to meet critical milestones. She will be the primary point of contact for the award. The project budget and work plan anticipate 50% of Garrett's time committed to this project.

Program/Project Managers: AEA has a team of highly qualified renewable energy project and program managers that work for Conner Erickson, Director of Planning and Audrey Alstrom Director of Renewable Energy and Energy Efficiency. Staff assignments will be made as projects and the technologies they are going to implement become clear.

Financial Management: AEA's Controller will oversee the project's financial progress. When the Project Management Plan is accepted, a grant agreement will be issued to the individual project sites. Each Project has a unique project code and grant number used for tracking each funding source and required match. The finance team will certify financial reports for Department of Energy reporting requirements. AEA's Grants Manager will oversee the award from Department of Energy and the grant agreement documents with the remote Alaskan communities. They will ensure AEA's compliance with grant requirements and related reporting.

The Alaska Native Tribal Health Consortium (ANTHC) Division of Environmental Health and Engineering (DEHE) offers numerous services to Tribal Health Organizations through its role as the Maintenance & Improvement (M&I) Program Custodian. ANTHC is the nation’s largest tribal health organization, providing statewide health service programs for Alaska Natives. ANTHC’s unique self-governance agreement with the Indian Health Service was authorized in 1997 by PL 105-83, Sec. 325. The Consortium works in cooperation with tribes, Tribal Health Organizations (THO), agencies, municipalities, and private foundations. ANTHC is a source of technical and engineering expertise, and will be included in project consultation and coordination, assisting AEA program staff with assessment of needs and project implementation.

Alaska Municipal League (AML). The Alaska Municipal League (AML) is a member-based service organization that works to strengthen Alaska’s 165 cities and boroughs. AML has responded to Executive Order 14008 and the federal prioritization of tackling climate change, environmental justice, and inequity by providing a suite of services that help local governments meet associated goals. AML members and associated Tribal governments can utilize our shared service program to contract for a coordinated approach to addressing equity and environmental justice within the context of project development and implementation. Nils Andreassen, AML’s Executive Director, has worked with communities across Alaska for more than 15 years, including to serve in a management role at nonprofit organizations for 10 years. Nils has contributed to State efforts and helped draft its Arctic policy, as well as its Climate Action Plan. Nils serves on the Denali Commission, served on the Governor’s Broadband Task Force, and is on the board of directors of the National League of Cities (NLC). His role in this project is to maintain and cultivate relationships that strengthen delivery of the program, assist with outreach to communities, and contribute input into the strategic direction and deployment of the project.

The Alaska Center for Energy and Power (ACEP). The Alaska Center for Energy and Power (ACEP) fosters innovative solutions to Alaska’s energy challenges and is a gateway for energy-related activity at the University of Alaska Fairbanks. ACEP partners with a diverse range of stakeholders to meet the energy research needs of Alaska and beyond. They offer technical assistance to communities, tribal organizations, utilities and non-profits; innovation partnerships for start-up companies; and industry-sponsored research to address specific technical, economic, social and scientific challenges. ACEP offers innovative research and testing facilities, as well as a wide range of energy systems modeling expertise, product testing, economic and technical feasibility assessments, data collection and analysis services and more.

Technical services to be provided by DOE/NNSA FFRDCs

None anticipated.

Endnotes

¹ <https://www.eia.gov/state/print.php?sid=AK>

² https://www.solarpowerworldonline.com/wp-content/uploads/2022/04/Blue_Planet_Project_Shungnak.pdf

³ Circuit Rider Program (3 AAC 108.200 – 240)

⁴ <https://uaf.edu/acep-blog/how-alaska-fits-into-the-global-microgrid-movement%20.php>

⁵ <https://uaf.edu/caps/our-work/CAPS-alaskas-climate-policy-development-report-29April2021.pdf>

CURTIS W. THAYER

Experience and Achievements

Alaska Energy Authority

2019-Present

The Alaska Energy Authority (AEA) is a public corporation of the State of Alaska governed by a board of directors with the mission to “reduce the cost of energy in Alaska.” AEA is the state’s energy office and lead agency for statewide energy policy and program development.

Position: **Executive Director**

- The Executive Director serves as the Chief Executive Officer of the Authority, responsible for all business and operations. I work closely with the Board as it sets Authority policies, goals, and objectives, and is responsible for the execution of Board directives. I have developed a close relationship with the Governor, Commissioners of principal State departments, the Legislature, business community, and the public to advance the mission of the Authority.

Achievements: Increased the profile and developed a strategic action plan to advance the goal and objectives of the Authority

- Worked with the Board to establish long-range vision, strategies, goals, policies, and plans; including leading the strategic planning process and working with the Board and Legislature to implement the strategy to achieve that vision.
- Strengthening the working relationship with the five utilities is like shuttle diplomacy. A few of the key issues during the three years have included purchase of develop a strategy and bonding package for a \$170 million upgrade for the transmission lines from Homer to Anchorage (closes 11/30/22), purchase SS/Q line (\$17 million), Battle Creek diversion and construction delays and construction claims, litigation on the SQ line, and Governor’s goal of reducing the cost of power. Managing expectations of the Board, Governor’s Office, Legislature and our five utility partners has proved to be challenging (and rewarding).
- Oversight responsibility of the Authority’s rural energy programs, including energy system upgrades, loan programs, alternative/renewable energy, energy efficiency, and the Power Cost Equalization program.
- Reviewed and analyzed legislation, laws, regulations, and other public policies that may affect the Authority’s mission and programs and recommends changes when appropriate.
- Developing and maintaining professional/cooperative relationships with local, state, and federal agencies, and Authority business partners.
- Working with legislative or other government agencies regarding policies, programs, and budgets.

Alaska State Chamber of Commerce

2015-2019

The Alaska Chamber is a non-profit, membership funded advocacy organization founded in 1953. The Chamber membership is comprised of companies, associations, and individuals from every business sector in Alaska. The Chamber’s core mission is to make Alaska the best place to do business through its advocacy for and defense of sound business policies based on the principles of free enterprise, personal responsibility, and limited government.

Position: **President and CEO**

- As the President & Chief Executive Officer, I serve as the top administrative officer, principal spokesman, chief advocate in Juneau and Washington DC, chief finance officer and team leader.

Achievements: Raised the profile of the Alaska Chamber

- Coordinated and guided the work of staff, lobbyists, counsel, committee, and volunteers in marshaling and expressing the Chamber’s business perspective on public policy issues which has increased the profile of the Alaska Chamber statewide through outreach and tackling tough legislative positions that benefit and promote business.
- Lead efforts to develop and manage coalitions involving other business associations, advocacy groups local chambers and the US Chamber to achieve Chamber goals.
- Grew Chamber membership for the last three straight years.
- Developed and implemented a financial plan that has increased Chamber reserves by 15 percent within three years.

State of Alaska, Department of Administration

2012 – 2014

With 1,100 employees and an annual budget of \$350 million, DoA facilitates state government operations by providing policy leadership and management services in essential areas, including finance/accounting, payroll, human resources/retirement benefits, information technology, labor negotiations, legal services, procurement/facilities, and risk management.

Positions: Commissioner & Deputy Commissioner

- Served as the chief executive officer of DoA and as a member of Governor Sean Parnell's cabinet. Unanimously confirmed by the Alaska State Legislature.
- Advised Governor on IT, pensions, healthcare, and labor relations with the Legislature and business community.
- Responsible for development and implementation of all DOA policies and programs. Hired and managed two deputy commissioners and ten division directors.

Achievements: Reducing the Cost of Government

- Reformed PERS/TERS (state/local government pension programs) to reduce annual state contribution and ensure long-term solvency. Annual savings are more than \$300 million.
- Restructured AlaskaCare (state healthcare program) to reduce state contribution without reducing core benefits. Annual savings are more than \$60 million.
- Negotiated with the state's eleven public employee's unions to limit automatic merit increases, reduce leave accruals, and cap benefit cash-outs, all without work stoppages. Annual savings are more than \$20 million.
- Worked with Legislature to revamp state procurement statutes to increase transparency and competition. Applied new statutes and best practices to major telecom procurement, which reduced annual state expenses by 50%.

Previous Experience

- **2009-2012:** Deputy Commissioner, State of Alaska, Department of Commerce, Community, and Economic Development
- **2004-2009:** Director, Corporate and External Affairs, ENSTAR Natural Gas Company
- **2002-2004:** President & CEO, Thayer & Associates (political and corporate communications consulting)
- **2001-2002:** External Affairs Advisor, Alaska Gas Producers Pipeline Team (BP, Phillips, Exxon)
- **1997-2000:** Special Assistant, U.S Congressman Don Young (R-Alaska)
- **1993-1996:** Professional Staff, U.S House Committee on Natural Resources
- **1991-1992:** Management Specialist, Federal Bureau of Investigation (FBI)

Education

- **University of Alaska Fairbanks, Fairbanks, AK.** Bachelor of Arts in Political Science and Business/Justice
- **National Renewable Energy Lab (NREL), Golden CO,** Executive Energy Leadership Academy
- **University of Wisconsin,** Institute of Organizational Management, U.S. Chamber
- **State of Alaska,** Real Estate License

Community Activities***CURRENT***

- Alaska Board of Marine Pilots, Chair
- Don Young Institute for Alaska, Chair
- Alaska Leaders Archives, Treasurer

PAST

- Alaska Gas Line Development Corporation, Director
- Alaska Housing Finance Corporation, Director
- Alaska Retirement Management Board, Trustee
- Alaska Royalty Oil and Gas Development Advisory Board, Director
- Abused Women Aid in Crisis (AWAIC), Director and Treasurer
- Committee of 100 Top Chamber Executives, U.S. Chamber
- Council of State Chamber Executives
- Selected as "Top 40 under 40" community leader

CLAY CHRISTIAN MBA, MS, CPA, CIA

clay.christian@gmail.com • Cell: 301-706-1061 • [LinkedIn Profile](#)

• Chief Financial Officer •

Chief financial officer with a long career of leadership for organizations undergoing major transitions. Creative and sound decision-making through changes in strategic direction, mergers and acquisitions, fundraising, debt and equity financing, performance improvement, financial audit restatements, and information systems. Focus areas include capital programs, investment, restructuring and alignment, asset management, procurement, real estate and construction, contract management, optimization, compliance, team building, and continuous training and process improvement.

Deep experience with public and private partnerships, government sponsored entities, not-for-profit companies, investment tax credit, and qualified opportunity zone business development programs. Certified Public Accountant, Certified Internal Auditor, and Big 4 public auditor.

• CORE COMPETENCIES •

Chief Financial Officer • Strategic Planning • Risk Management • Capital Development • Not-for-Profit Mergers and Acquisitions • Financial and Management Reporting • Change Management • Optimization
Excellent Written & Verbal Communication Skills • Leadership • Team Building and People Development
Information Systems • Internal Controls • Training • Continuous Process Improvement

• KEY ACHIEVEMENTS •

- Chief Financial Officer for Alaska Infrastructure Development and Export Authority ([AIDEA](#)) and Alaska Energy Authority ([AEA](#))
- Vice President, Finance for 130-year-old company, [Crowley Fuels](#), Alaska
- Interim-Controller for start-up \$3 billion [Water Street Tampa](#) real estate development
- Independent consultant through Cross Services LLC for numerous companies undergoing substantial change (Fannie Mae, Muni Mae, Capital Petroleum Group, and above Water Street Tampa)
- Worked remotely through pandemic and delivered outstanding results
- Strong engagement with public auditors through new audits, consolidations, and financial restatements
- Frequent meetings with boards, executives, general counsel, and operational leaders
- Strategic and financial transformations

• PROFESSIONAL AND CONSULTING EXPERIENCE •

Chief Financial Officer: Alaska Infrastructure Development and Export Authority ([AIDEA](#)) and Alaska Energy Authority ([AEA](#)) – Anchorage, Alaska 2023 – Present
Leading team of more than 22 professionals for both entities who manage more than \$3 billion in investment, federal, and state programs.

Vice President, Finance: Crowley Fuels – Anchorage, Alaska 2021 – 2023
Lead for more than 20 professionals; equity raise of \$120m; capital improvements of \$20m; budgeting, forecasting, optimization, financial and compliance audits, investor presentations.

Private Equity Investment Firm (Cross Services LLC) – Remote to Tampa, Florida 2019 – 2021
Privately held \$3B real estate investment, backed by wealthy individuals.

- Interim controller; overseeing financial reporting, compliance, and leading accounting transformation on behalf of RSM and Deloitte, global public accounting firms.

Capitol Petroleum Group (Cross Services LLC) – Washington, DC Metro Area 2011 – 2018
Privately held \$1B firm focused on wholesale and retail motor fuel sales in East Coast markets.

- Led first-ever comprehensive audits of companies, developed compliance program and financial reporting system. Worked closely with mezzanine investors and bankers through budgeting, forecasting, financial restatements, and consolidations.
- Designed and developed systems using SQL programs, created executive dashboards, trained accounting department, and implemented cloud-based applications to replace legacy systems.

Miscellaneous Clients (Cross Services LLC) – Washington, DC Metro Area 2009 – 2011
My private consulting firm, focusing on investment and capital raises for several non-public clients.

Municipal Mortgage & Equity LLC (Cross Services LLC) – Baltimore, Maryland 2007 – 2009
Real estate management company with portfolio of municipal and mortgage revenue bonds.

- Led team of 40 examining accounting and reporting of more than 20 business units subject to consolidation as variable interest entities. Designed and conducted cash flow modeling, valuation, and consolidation for 2,200 not-for-profit entities in affordable housing program.

Fannie Mae (Cross Services LLC) – Washington, DC Metro Area 2005 – 2006
Largest government sponsored entity providing mortgage capital to lenders, making housing more accessible and affordable.

- Led team to review accounting policies and information systems for mortgage-backed securities programs and investments in not-for-profit affordable housing organizations.
- Designed and developed SQL database to monitor and report operating performance.

• EARLIER EXPERIENCE •

Freddie Mac – Washington, DC Metro Area

- **Senior Director, Sarbanes-Oxley Compliance**

CohnReznick – Washington, DC Metro Area (lead CPA firm to low-income housing tax credit industry)

- **Senior Manager, Consulting and Audit**

Sodexo – Washington, DC Metro Area (global leader in food and facilities management services)

- **Senior Director, Strategic Information Analysis**
- **Director, Internal Audit**

Ernst & Young – Boston, Massachusetts (global leader in public accounting)

- **Manager, Consulting and Audit**

• EDUCATION AND CERTIFICATIONS •

MBA and MS, Accounting – Northeastern University, Boston, Massachusetts
MS, Economics and BA, Geography – West Virginia University, Morgantown, West Virginia

Certified Public Accountant – CPA (Massachusetts License No. 16762)
Certified Internal Auditor – CIA (Certificate No. 25966)

Pamela J. Ellis

Phone: (907) 771-3981 | Email: PELLIS@akenergyauthority.org

EDUCATION

- Master Class for Data Warehouse and Business Intelligence
University of Alaska Anchorage (Fall Semester 2015)
- *Bachelor of Arts*, Major in Accounting / Minor in Management
College of Saint Benedict – Saint Joseph, Minnesota (1987-1989)
University of San Diego – San Diego, California (1985-1986)

EXPERIENCE

Alaska Energy Authority - Anchorage, Alaska

Controller | December 19, 2022 to Present

Supervisor: Curtis Thayer

- Duties include supervision of the daily accounting functions, finance staff; Develop, design and implement policies, procedures, internal controls and work processes; oversees the Finance section for the Alaska Energy Authority (AEA); Direct supervision of a Project Controller and Assistant Controller; conducts and oversees research and implementation of new accounting standards; controls budget and expenditures for both the AEA operations and capital budgets with restrictions by funding source; Manages federal receipts by reviewing federal grant applications for sufficient federal budget authorization and funding for match requirements; manages federal grant applications and ensures that finance components of the federal financial assistance award applications are properly completed; Manages the financial transactions of awarded federal grants and assures compliance with all federal financial reporting requirements; Reviews and assists with the publication and audit, by external auditors, of the AEA annual Single Audit; Manages the receipt and expenditure of all other funding sources of AEA. Including state funds and community grants that are managed by AEA on behalf of communities; reviews all AEA sub-recipient grants for initial or amendment. Reviews and approves all sub-recipient awards close outs; and responsible for the annual financial statements for AEA. Oversees the annual financial audit with external auditors.

Municipality of Anchorage - Anchorage, Alaska

Assistant Controller (Acting Controller 2011 & 2019) | February 2008 to Present December 16, 2022

Supervisors (Controllers/CFOs (when Acting for over 6 months)): Teresa Peterson, David Ryan, Lucinda Mahoney (CFO 2011), Nanette Spear, Tom Fink, Tammy Clayton, Alex Slivka (CFO 2019), and Mollie Morrison.

- Supervision of up to seven staff accountants and up to four Contractors (Supervisory backfill during SAP implementation) as Assistant Controller and up to twenty-three staff accountants and four supervisors as Acting Controller for the Controller Division;
- Duties of the Assistant Controller include review and creation of year-end workpapers, Detail Statements, capital asset schedules, footnotes, required supplementary schedules (RSI's), and statistical tables for the Annual Comprehensive Financial Report (ACFR). Coordination with internal and external auditors including audit field work and audit of the detailed statements and ACFR. As Acting Controller created the Letter of Transmittal and MD&A for the ACFR. Created audit finding recommended corrective action plans. Creation of the GASB 34 conversion entries and all required documentation. Recording of all debt financing activities at the governmental fund level and processing the conversion to the government-wide level for government-wide financial statement presentation.
- Create and post in the General Ledger (GL) all required GL transactions required for G.O. debt refunding's. Review all new G.O. debt GL postings for MOA's Governmental Funds. Offer consultation with the Public Finance Division in regard to capitalization of capital assets for upcoming G.O. Bond issues.
- Incorporation of three discretely presented component units and one trust fund in the form of four separate stand-alone audited financial statements into the government-wide financial statements for MOA.
- Creation of a full set of stand-alone financial statements for CIVICVentures LLC (a blended component unit), including the MD&A, financial statements (in the full accrual and modified accrual presentation) with a two-year comparison and footnotes. Maintenance of inventory documentation and capital asset schedules. Participation in the annual audit.
- Oversight of all daily accounting functions of Governmental Funds (to include the General Fund), Enterprise Funds, Internal Service Funds, Fiduciary Funds, and Suspense Funds (such as the Cash Pool Fund and the Employee Pay and Benefits Fund). Oversight of the MOA's capital asset and construction work in progress (CWIP) daily accounting activities. The Assistant Controller supervises the Fixed Asset Accountant and Infrastructure Accountant for MOA. Daily review and approval of journal entries, fund certifications of Municipal Assembly documents, and reconciliations. Creation and management of month and year-end processing schedules. Responsible for period close coordination with other Finance Directors. Hold weekly meetings as required. Process the year-end split payroll postings and perform extensive reconciliations before posting.
- Subject matter expert (SME) of the General Ledger (GL), Controlling Module (CO), Asset Management Module (AM), and the Projects Module of SAP.

- Assist with implementation of all new GASB pronouncements. Review and update of Finance policy and procedures. Creation of internal control documentation and oversight of internal controls regarding the GL and creation of the ACFR per GAAP. Acting Controller as required.

Fund / Reconciliation Accounting Supervisor | February 2005 to January 2008

Budget Coordinator Finance & CFO Departments

Supervisors: Teresa Peterson, Wanda Tankersley, Michelle Drew, and David Richards

- Supervised five Senior Staff Accountants. Two reconciliation accountants and three fund accountants. Oversight of the MOA's daily accounting activities of the General Funds, Enterprise Funds, Special Revenue Funds, Debt Service Funds, Internal Service Funds and Trust Funds (Fiduciaries). To include review of all fund certifications created for the CFO for pending assembly legislation. Oversight of MOA's capital asset module and creation of MOA's capital asset footnote for the ACFR. Creation of various footnotes, RSI's, and statistic tables of the ACFR. Review of MOA's bank reconciliations, investment reconciliations, subledger to general ledger reconciliations and unclaimed property filings. Assist four Finance Divisions of the Finance Department and the CFO Department with review and creation of their annual operating budgets. Assist with review and updates to the intergovernmental cost allocation plans (IGCs) and methodologies for the Finance and CFO Departments. Acting Controller as required.

General Fund Accountant | April 2004 to January 2005:

Supervisor: Guy Baily

- Create workpapers, detail statements, RSI's, and statistical tables for all of MOA's General Funds. Review and MOA wide department generated journal entries and creation of journal entries for all of MOA's General Funds. Create fund balance worksheets for the General Funds of MOA. Reconcile all balance sheet accounts of the MOA General Funds and create year-end workpapers.

Grant Fund Accountant | October 2001 to March 2004

Supervisor: Catherine Gettler-Amyott

- Create monthly and quarterly grant reports for state, state pass thru federal, and federal grants awarded to MOA. Reconcile the GL to grant reports and make correcting entries in the GL as required. Receipt all grant proceeds and create year-end accrual / deferral entries. Create workpapers for the generation of the Single Audit. This was for MOA's Capital Project Funds, Enterprise Funds and Special Revenue Funds. Assist in audit requests when being audited by external or internal auditors.

Reconciliation Accountant | April 2001 to September 2001

Supervisor: David Richards

- Reconciled the Accounts Payable subledger and Accounts Receivable subledger to the General Ledger. Reconciled the revenue postings to all Governmental Capital Project Funds and created corrective entries.

PROFESSIONAL BOARDS AND PROFESSIONAL CERTIFICATES

- Governmental Finance Officers Association – Member
- Municipal Audit Committee – Member (when serving as the Acting Controller)
- Lost Lake Run Board Member
- GFOA certificate for Excellence in Financial Accounting and Reporting (2019 and 2020).

COMPUTER SKILLS

- | | |
|---|--|
| ▪ Microsoft Word | ▪ Intuit Turbo Tax |
| ▪ Microsoft Excel | ▪ Intuit QuickBooks Pro |
| ▪ Microsoft PowerPoint | ▪ SAP (to include completion of 1 semester SAP course at UAA on Hana, BW, and NetWeaver) |
| ▪ Microsoft Outlook | ▪ Kronos and NEOGOV |
| ▪ PeopleSoft Financial Systems | ▪ Libra Accounting Software |
| ▪ Corel WordPerfect | ▪ Skyline Software Systems |
| ▪ Corel Quattro Pro | ▪ Onsite Manager |
| ▪ IBM Lotus | ▪ Various Web Based Reporting Systems |
| ▪ Yardi Property Management Software | |
| ▪ Microsoft Dynamics NAV 365 Business Central | |

Rebecca Garrett, PMP

AEA Rural Programs Manager
rgarrett@akenergyauthority.org

Professional Work Experience

State of Alaska, Alaska Energy Authority, Rural Energy Group

Rural Programs Manager September 2022 - Present

Oversee the Rural Programs Projects Managers and Grants section. Manage Rural Power System Upgrade (RPSU) Program. Manage Bulk Fuel Upgrade (BFU) Program. Manage rural power system construction projects. Collaborate with other agency staff, rural community entities, and federal agencies to coordinate diverse interests in rural power system projects. Seek out and apply for funding for agency and partner energy projects.

State of Alaska, Alaska Energy Authority, Rural Energy Group

Project Manager/Program Manager February 2018 – September 2022

Manager Rural Power System Upgrade (RPSU) Program. Manage rural power system construction projects. Manage the active construction of 3 heat recovery systems around the state of Alaska. Manage State Clean Diesel (DERA) program for Alaska Energy Authority. Manage the DERA rural powerhouse engine replacement projects. Offer technical assistance to communities that need efficiency upgrades and/or are experiencing problems with the power system. Assist rural communities with funding opportunities and questions to expand the reach of energy projects and programs.

State of Alaska, Alaska Energy Authority, Rural Energy Group

Assistant Project Manager June 2014 – January 2018

Manage end use (conservation) projects. Manage rural power system construction. Manage the construction of heat recovery systems around the state of Alaska. Manage State Clean Diesel (DERA) program for Alaska Energy Authority. Offer technical assistance to communities that need efficiency upgrades and/or are experiencing problems with the power system. Assist rural communities with funding opportunities and questions to expand the reach of energy conservation. Coordinate the Rural Energy Conference every 18 months (2002-2016).

State of Alaska, Alaska Energy Authority, Rural Energy Group

Project Development/Project Manager January 2009 - June 2014

Manage end use efficiency (conservation) projects. Develop and present regional energy fairs around the state with a focus on energy efficiency. Assist rural communities with funding opportunities and questions to expand the reach of energy conservation. Coordinate the Rural Energy Conference every 18 months (2002-2016). Monitor section needs and lobby for additional support when necessary.

State of Alaska, Alaska Energy Authority, Alternative Energy and Energy Efficiency Section
Program/Project Manager September 1999 – January 2009

Manage end use efficiency (conservation) program. Develop and present regional energy fairs around the state with a focus on energy conservation. Assist rural communities with funding opportunities and questions to expand the reach of energy efficiency. Authorize and release the Energy Cost Reduction RFP. Administer each project that results from the Cost Reduction RFP analysis. Facilitate bi-weekly section meetings, and collaborate with Accounting and Procurement. Oversee 20 projects with budgets totaling over \$20 million all over the state of Alaska. Coordinate the Rural Energy Conference every 18 months (2002-2016).

Work History

State of Alaska - Alaska Energy Authority, Rural Programs Manager September 2022 - Present

State of Alaska - Alaska Energy Authority, Project/Program Manager February 2018 – September 2022

State of Alaska - Alaska Energy Authority, Assistant Project Manager June 2014 – January 2018

State of Alaska - Alaska Energy Authority, Project Development January 2009 – June 2014

State of Alaska - Alaska Energy Authority, Energy Efficiency Program May 2001 – May 2009

State of Alaska - Alaska Energy Authority, Training Program Manager May 1997 – May 2001

State of Alaska – Division of Energy, Administrative Clerk III March 1997 – May 1997

Avis Rent-a-Car, Assistant Manager – Rental Counter September 1992 – December 1997

Certifications

Project Management Professional (PMP) May 2018

Project Management Institute September 2015

Meeting Professionals International March 2007

Notary Public May 1997 – present

E-Writing, Business and Technical Writing March 2006

Post Baccalaureate Course Work

University of Alaska, Fairbanks May 2021

Sustainable Energy Occupational Endorsement

University of Alaska, Anchorage September 2006 – May 2007

Organizational Behavior (BA 300), Technical Writing (ENGL 212)

University of Alaska, Fairbanks March 1998

Cultural Awareness

Education

BA History, University of Alaska, Anchorage May 1996

Dimond High School, Anchorage Alaska June 1991

Volunteer Experience

State of Alaska, Polling Place Worker, Anchorage AK August 2020 -Seasonal

Primary and Election day worker at local polling station

Gladys Wood Elementary School, Volunteer, Anchorage AK September 2006 – 2013

Parent working in the classroom and Parent-Teacher Organization

Audrey Alstrom, P.E.

(907)-771-3058 | aalstrom@akenergyauthority.org | <http://bit.ly/AAlstromLinkedIn>

SKILLS

Project manager with experience in program development and management in rural energy and academia.

- Technical Analyses
- Economic Modeling
- Personnel Management
- Community and Brand Building
- Data Management
- Technical Writing
- Cross-cultural Communication
- *Familiar with:* AutoCAD, ArcGIS, CRM tools

EDUCATION AND LICENSES

Exec. Master of Public Administration – *Evan’s School of Public Policy & Governance, University of Washington*

Professional Engineering (P.E.) License – *State of Alaska*

Bachelor of Science, Civil Engineering – *University of Alaska Anchorage*

Associate of Arts, General – *University of Alaska Fairbanks, Kuskokwim Campus*

PROFESSIONAL EXPERIENCE

Director – Alternative Energy and Energy Efficiency, Alaska Energy Authority, 2022 – present

Responsible for the management and oversight of the Alternative Energy and Energy Efficiency (renewable energy) department and projects. Provides renewable energy expertise and guidance to internal staff and external stakeholders on the relevant renewable technology, as well as providing technical assistance in the development of grant applications for potential projects. Manages the planning, design, and construction of renewable energy projects throughout Alaska.

Senior Director, UAA Alaska Native Science & Engineering Program, 2014 – 2022

Responsible for ANSEP’s University and Graduate programs. Advanced positive and effective relations between external partners, such as state and federal agencies, industrial firms, community/civic groups, foundations, other universities, Alaska Native Regional Corporations and their Nonprofit organizations, public schools and university resources. Worked collaboratively with public school administrators, professors, students, parents, human resource directors, and curriculum and staff development specialists, to promote programs. Oversaw hiring, training, supervision and evaluation of 30+ program staff and program consultants. Managed annual budget for component and made major budgetary and resource allocation decisions. Identified fundraising and development opportunities. Developed and implemented middle school component to expand from 2 camps per year to 14.

Program Manager - Hydroelectric, Alaska Energy Authority, 2013 – 2014

Responsible for management and development of hydroelectric program. Oversaw and managed annual budget for program. Evaluated potential project proposals for funding of various energy supply options by assessing economic benefits and costs, technical and environmental feasibility. Provided technical project management and oversight of the planning, design and construction of rural energy power systems. Co-author of “Can the State of Alaska Match its Energy Demand through Installed Hydropower Capacity?” April 2014.

Asst. Project Manager - Hydroelectric, Alaska Energy Authority, 2010 – 2013

Provided technical assistance in planning, review, and implementation for reconnaissance, feasibility, permitting, design and construction phases of hydroelectric development of AEA- funded hydroelectric projects under guidance of hydroelectric project manager. Responsible and provided technical support for 35 projects, totaling \$25 million. Helped screen and launch AEA hydro database.

Summer Engineer, ConocoPhillips Alaska, Summers 2008 & 2009

Initiated the start-up and turnover of a Chemical Systems Upgrade project by working with project team, assigning responsibilities, completing and uploading project documents to group server. Completed economic evaluations of Prudhoe Bay Unit Renewal Cases in regard to possible gas sales using COP’s Economic Modeling Tool. Reviewed 43 projects, recommended 13 for consideration.

General Intern, CH2MHill, 2007 – 2008

Worked in Engineering Design Group West under supervision of civil engineer in environmental and transportation design. Used AutoCAD and MicroStation to help design roads, walkways, and utilities for various client projects.

*Additional experience working with the local fishing industry, Alaska Native village corporations, and city and tribal governments.

HONORS AND ORGANIZATIONS

American Society of Civil Engineers, 2006 – present

Yukon-Kuskokwim Comprehensive Economic Development Strategy Working Group, 2019 – present

Alaska Native Science and Engineering Program, alumni

Ciulamta Traditional Drummers and Dancers, founding member

University of Hawaii, U.S. Dept. of Defense High Performance Certificate

Alakanuk Traditional Council Board Member

Alakanuk Schools Advisory School Board Member

Conner Erickson

Director of Planning
Alaska Energy Authority

CONTACT

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Anchorage, AK 99503

- ▶ 907-771-3025
 - ▶ cerickson@akenergyauthority.org
 - ▶ [Alaska Energy Authority](#)
-

EDUCATION AND TRAINING

University of Denver, Denver, CO – Bachelor of Arts, 2010

- ▶ Major: B.A. Economics w/ Honors
 - ▶ Major: B.A. International Studies
 - ▶ Minor: Leadership Studies
 - ▶ Cum Laude
-

RESEARCH AND PROFESSIONAL EXPERIENCE

2023 – Present

Director of Planning • Alaska Energy Authority

Administrator for the Renewable Energy Grant fund, a competitively solicited grant program, funded via state appropriations, which seeks to provide financial assistance to thoroughly vetted renewable energy projects across multiple project phases, including pre-construction. Administrator for the Power Project Fund Revolving Loan program, a patient capital loan program which seeks to provide low-cost financing to smaller-sized utility-scale energy development across the state. Co-manage multiple state applications for federal funding opportunities within the Bipartisan Infrastructure Law of 2021, including but not limited to a \$60 million competitive formula grant program aimed at grid resilience measures, and a \$4.5 million revolving loan fund capitalization program. Perform bill analyses concerning the impact to the Alaska Energy Authority for proposed legislation by members of the legislature.

2021 – 2023

Planning Manager • Alaska Energy Authority

Assisted in administering the Renewable Energy Fund Program, along with the Director of Planning. Successfully secured \$19.75 million in state funding in support of 38 projects across Round 13 and Round 14 of the grant program. Administered the Power Project Revolving Loan Fund including but not limited to loan analysis and processing, loan due diligence, presentations to loan committee and AEA Board of Directors, loan loss reserve calculations, loan action follow-up and responding to audit requests. Grew outstanding loan portfolio by \$2.7 million. Recapitalized available loan fund balance by \$2.8 million through processing of committed, idle loan applications. Performed various ad-hoc economic analyses relating to prospective energy projects.

2020 – 2021

Economist • Alaska Energy Authority

Performed various ad-hoc economic analyses relating to prospective energy projects and asset sales as requested by various state departments and offices. Conducted quality control / quality assurance on the economic evaluations of those applications to the Renewable Energy Fund as performed by third party, contracted economists. Performed economic and financial evaluations for applications to the Power Project Loan Fund.

2020

Sr. Business Analyst • Northern Air Cargo, LLC

Served as the dedicated business analyst for Northern Air Cargo. In this capacity, provide business intelligence support via the reporting of operational and financial data of air cargo and maintenance operations. Budget analytics were provided primarily utilizing SAP Business Objects, for data querying, reporting and visualization. Provided analytical support including but not limited to budget creation and month-end variance analysis, integration of P&L into SAP Business Objects, and ad-hoc analysis as requested from executive level personnel. Acted as the dedicated capital analyst, managing capital expenditure planning and reporting for all business units. Created, reported on, and administered Northern Air Cargo's 5 year capital plan through management of data submissions via regular consultation with business unit managers on their capital needs and requirements, including airline operations, ground services operations, and facility operations.

2016-2020

Sr. Analyst • Alaska Communications

Provided business intelligence support to the Enterprise (B2B) sales team by combining disparate data sources into comprehensive real-time dashboards supporting daily business operations. Utilized multiple dataset types, including ETL, in combination with Transact-SQL, Excel, and PowerBI to provide such support. Provided real-time analytics for an array of requests utilized in formulating business strategy, corporate growth tactics, and internal and external reporting requirements. Translated using a combination of power-queries, macros, and dynamic formulae the Sales commissions payment agreement into spreadsheet form. Administered and maintained commission workbooks for monthly commission processing. Worked closely with C-suite executives, Compliance, and Human Resources personnel in this capacity.

SYNERGISTIC ACTIVITIES

- ▶ *Renewable Energy Fund Program Administrator*, Alaska Energy Authority, 2020 – Present
 - ▶ *Power Project Fund Revolving Loan Program Administrator*, Alaska Energy Authority, 2021 – Present
 - ▶ *Business Intelligence Dashboard Data Administrator*, Alaska Communications, 2018 - 2020
 - ▶ *Level 1 Microsoft Access Certification*, 2016
 - ▶ *Feasibility consultant on 30+ international projects with an aggregate project value of \$700+ million*, Wert-Berater, Inc., 2012 - 2016
 - ▶ *Graduate Pioneer Leadership Program*, University of Denver, 2010
-

Karen Bell

Manager of Planning
Alaska Energy Authority

CONTACT

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- ▶ 907-771-3951
- ▶ kbell@akenergyauthority.org
- ▶ [Alaska Energy Authority](#)

EDUCATION AND PROFESSIONAL TRAINING

Johns Hopkins University – Master of Science, 2021

- ▶ Major: Applied Economics

Fordham University – Bachelor of Science, 2001

- ▶ Major: Business Administration
- ▶ Concentration: Economics
- ▶ Minor: Mathematics

National Association of Business Economics – Professional Certificate, 2022

- ▶ Economics of Strategy and Managerial Decision Making

PROFESSIONAL EXPERIENCE

STATE OF ALASKA - ALASKA ENERGY AUTHORITY

- Manager of Planning, March 2023 – Present • Economist, May 2022 – March 2023

Assists with the administration of the Power Project Loan Fund including reviewing applications, performing due diligence, determining eligibility, conducting financial feasibility analyses, preparing written summaries for loan packets, and calculating loan loss reserves. Prepares the Request for Application for the Renewable Energy Fund (REF) grant program, including updating the assumptions in the economic evaluation model, preparing fuel price forecasts, and calculating household energy burden by community. Reviews REF grant applications and economic evaluations for accuracy and reasonableness. Participates in the scoring of REF application and preparation of the recommendation to the Alaska State Legislature. Prepares Request for Proposals and participates in scoring proposals from potential contractors.

MUNICIPALITY OF ANCHORAGE – ANCHORAGE HEALTH DEPARTMENT

- Program Manager, November 2020 – December 2021

Principal officer responsible for the administration of the Municipality's funding from the U.S. Department of Housing and Development (HUD). Directed the allocation and procurement of \$13 million in funding during 2020 and 2021. Responsible for federal reporting, monitoring of contractors, and managing grant budgets. Developed program specific policies and procedures and ensured compliance by grantees. Directed and oversaw the work of a four person staff. Contracted by the Municipality from August 2021 to December 2021 to onboard my successor.

MUNICIPALITY OF ANCHORAGE – ANCHORAGE WATER & WASTEWATER UTILITY

- Regulatory Affairs Manager, December 2013 – November 2020

Responsible for the oversight of the Utility's participation in regulatory proceedings. Directed and oversaw the work of a three person staff. Developed revenue requirement studies, cost of service studies, financial models, statistical analyses, and cost benefit analyses. Provided written and oral testimony before the Regulatory Commission of Alaska in support of revisions to rates, changes to provisions of service, and changes to Alaska Administrative Code. Filled role of Acting Chief Financial Officer during 2017 and 2018. Played integral role in the development of the long-range financial plan and budget 2017- 2020. Presented to the Anchorage Assembly, Utility Board of Directors, and Community Councils in support of Utility initiatives.

- Utility Financial Analyst, July 2010 – December 2013

Analyzed financial data and developed pro forma financial statements based on rate making theory to better reflect the current operating environment. Assisted in the preparation of revenue requirements studies. Prepared discovery responses during rate cases.

MACY'S CORPORATE

- Planner, March 2007 – April 2010

Responsible for the allocation of merchandise to support over \$300 million in annual revenue. Developed merchandise strategies for 600+ locations based on history, climate, and customer demographics. Forecasted sales and inventory by location and negotiated with vendors to mitigate loss.

- Manager, Merchandise Information Organization, September 2003 – March 2007

Oversaw functions of the Allocation and Order Management departments and eight person staff. Supported enterprise system rollouts by creating business requirements, user testing, troubleshooting, and documenting business scenarios. Developed and implemented training curriculum throughout the organization.

- Financial Analyst, July 2001 – September 2003

Developed and executed pricing strategies in support of financial, product, and marketing objectives.

SYNERGISTIC ACTIVITIES

- ▶ Renewable Energy Fund Program, Alaska Energy Authority, 2022 – Present
 - ▶ Power Project Fund Revolving Loan Program, Alaska Energy Authority, 2022 – Present
 - ▶ Administrator for the Municipality of Anchorage's HUD Grants, 2020 -2021
 - ▶ National Association of Business Economic Member, 2021 – Present
 - ▶ Society for Benefit-Cost Analysis Member, 2021 - Present
 - ▶ Society of Depreciation Professionals, Depreciation Fundamentals Program Participant
 - ▶ Institute of Public Utilities, Fundamentals of Regulation Workshop & Advanced Regulatory Studies Program Participant
-

Karin St. Clair
AEA Grants Manager
907-771-3081
kstclair@akenergyauthority.org

Professional Experience

Alaska Energy Authority – *Grants Manager* - Dec 2011-2016 & Aug 2019-Present

Maintain grants management database. Prepare reports from grants management software. Ensure data integrity in databases. Evaluate grantee proposal, plans and justifications to include cost factors. Process grant applications and obtain outstanding materials. Monitor and ensure timely receipt of reports from grantees. Monitor and administer federal and state grants and contracts. Collect and analyze grant data. Maintain electronic and physical files related to all aspects of the grant cycle. Prepare, scan, and verify historical documents for electronic conversion. Prepare grant agreements, notification letters, applications, and letters of inquiry. Communicate with Federal, State, and local agencies regarding award compliance. Review contracts for completeness, accuracy, and conformance with state regulations. Provide technical guidance to internal and external stakeholders on grant administration and financial policies, procedures, statutes, and regulations. Serve as liaison between the project managers and outside funding agencies; provides assistance in resolving issues and conflicts with funding agencies; participates in meetings and discussions in which decisions affecting projects are made. Inform grantees regarding regulation changes impacting grant opportunities. Process amendments, modifications, extensions, and terminations of contracts and subcontracts

Alaska Energy Authority – *Project Controls* - Jul 2016-Jan 2020

Track status reporting, financial reporting, milestones, and deliverables of projects. Track and audit internal controls and guidelines associated with project controls. Monitor budget, scope, and milestones. Provide leadership and training to team members on internal controls and guidelines associated with project controls. Recommend and execute corrective actions to handle project compliance. Identify upcoming project milestones and customer requirements so that Project Managers can ensure satisfaction of project milestones and customer requirements. Monitor and implement approved project management plan changes. Management of less complex projects and close outs. Identify all funding sources and develop a monitoring system for funding opportunities. Assist communities in writing grant applications. Assist in writing grant applications for agency.

Alaska Energy Authority – *Administrative Assistant* - Jun 2011-Dec 2011

Provided administrative support for various departments, including answering telephones, assisting visitors, resolving various problems, and assisting with inquiries. Prepared, transcribed, composed, typed, edited, and distributed agendas and minutes of numerous meetings. Scheduled and coordinated meetings, teleconferences, appointments, events, and other similar activities for staff, including travel and lodging arrangements. Assisted with Round V Grant Application data entry and file setup. Scanned, labeled, and tracked grant documents in award database (Navision). Entered milestones for grants in Navision. Created and maintained grant files and related paper documents. Tracked grant applications for Commercial Audit Program.

Communicated with auditors and commercial owners regarding project progress and missing information. Prepared reimbursement paperwork for the finance department

First National Bank Alaska - *Administrative Assistant* - 2009-2010

Prepared and assigned daily reports to Merchant Representatives. Logged and tracked the completion of reports by Merchant Representatives. Attended weekly staff meeting and transcribed meeting minutes. Arranged travel for Merchant Representatives. Monitored daily in town travel of merchant representatives. Monitored and ordered all supplies for department. Scheduled all trainings as well as reserved rooms and equipment needed. Composed and prepared mass mailings to merchants. Performed credit checks, acquired financial statements and business licenses for potential merchants. Worked with the IT Department in developing a new program for Merchant Services using Access and Excel. Responsible for merchant billing and collections. Answered multi-line phones, receive daily mail and incoming deliveries

Law Offices of Thom F. Janidlo Anchorage - *Administrative Assistant* - 2006-2009

Scheduled all attorney court hearings, client meetings and consultations. Transcribed during appropriate trial setting conferences and client meetings. Transcribed and prepared legal court documents. Performed legal research to assist attorneys with preparation of court documents. Maintained accurate records for attorney's billable hours. Identified more efficient and cost saving methods for ordering office supplies. Initiated the use of a credit card machine to assist in payment processing. Suggested the use of a scanner to replace paper processes, minimizing paper waste and expense. Answered multi-line phones, received daily mail and courier services. Computerized/Manual Accounts Payable/Receivable. Credit and Collections. Month-End-Closings. Account Reconciliation. Monthly Payroll Processing. Statement Billings. Customer Service/Client Relations. Office Management

Education

Project Management Institute- *Project Management Foundation* 2016

International Correspondence School- *Medical Office Assistant Certificate* 1999

Northwest College- *General studies* 1991-1992

Related Activities

- Thompson Grants
- Federal Grants Forum for State & Local Governments 2021
- Jim Hale
- Writing for the Workplace (one day seminar) 2014
- Gil Tran, Senior Technical Manager, OMB
- OMB's Grant Reform and the Uniform Guidance (one day seminar) 2014
- Colleen Campbell, State of Alaska Single Audit Coordinator
- State Single Audit Presentation (one day seminar) 2014
- Grants Management Workshop
- Grants Management Certificate (two day workshop certificate attached) 2012

Nils Andreassen

Executive Director
Alaska Municipal League

CONTACT

1310 Tarn Court
Juneau, AK 99801

-
- 907-351-4982
 - nils@akml.org
 - www.akml.org

EDUCATION AND TRAINING

University of Saskatchewan, Saskatoon, Saskatchewan

- Governance and Entrepreneurship in Northern and Indigenous Areas
- Master of Arts
- (Completion expected in December 2023)

University of Bradford, Bradford, United Kingdom

- Peace and Development Studies
- Bachelor of Arts, First Honours
- 2005

RESEARCH AND PROFESSIONAL EXPERIENCE

2018–Present

Executive Director • Alaska Municipal League

Supervise staff of twelve and support board of twenty-nine. Set strategic direction and implement member directed activities. Respond to 165 cities and boroughs, advocate for policy issues. Also serve as a Trustee of the Alaska Municipal League Joint Insurance Association, and as executive director of the Alaska Municipal League Investment Pool, overseeing \$460 million in assets. Responsible for:

- Alaska Remote Seller Sales Tax Commission, and \$20 million in annual tax collection
- Alaska Infrastructure Coordinating Committee, to maximize federal investment
- Cities of Opportunity, evaluating social determinants of health
- Annual Local Government Conference, with 1,000 attendees from across Alaska
- Stakeholder Engagement, DOE Alaska Energysched Tech Stack

2009–2018

Executive Director • Institute of the North

Principal Investigator for the Arctic Council's Arctic Energy Summit, Principal Investigator for

the Arctic Council's Arctic Maritime, and Aviation Transportation Infrastructure Initiative. Supervise staff of two to five people; manage funding of between \$500,000 and \$1,500,000 annually; and develop strategic plan and implementation process for the Institute of North. Support the high-level mission of the organization board of directors, and community outreach. Responsible for all fundraising, project development and project implementation.

2005–2009

VISTA Program Coordinator • Rural Alaska Community Action Program

Coordination of VISTA Village Council Management Program in ten rural communities, development of community planning curriculum for VISTA members. Coordination of environmental activities for 20 AmeriCorps members in rural Alaska, overseeing completion of Fire Smart Alaska program.

2006-2007

Adjunct Professor • University of Alaska, Anchorage

Preparation of lesson plans for weekly class of upper-level students covering topics that deal with the international political economy. Lecturing, providing a forum for discussion of issues and fielding questions.

PUBLICATIONS

- Alaska's Arctic, An Overview, <https://institutenorth.org/products-outcomes/alaskas-arctic-an-overview/>
- Lessons from the Arctic; The role of Regional Government in International Affairs, Thomas S. Axworthy, Sara French, Emily Tsui, Chapter 18, Page 297.
- Numerous letters to the editor and commentary in various publications

SYNERGISTIC ACTIVITIES

- Commissioner for Denali Commission
 - National League of Cities Board of Directors
 - Commonwealth North Board Member
 - National Association of Counties Western Interstate Region Board of Directors
 - Member, Alaska Energy Security Task Force
 - Board Member, RurAL CAP
-

Dustin M. Madden, CEM

[4500 Diplomacy Dr., Anchorage, Alaska 99508] | [(907) 304-2142] | [dmmadden1@anthc.org]

Employment Experience

Rural Energy Program Manager, Alaska Native Tribal Health Consortium (2020–Present)

- Manage a team of 9 employees and \$1.5 million annual operating budget
- Oversee project managers implementing a portfolio of approximately \$25 million in renewable energy and energy efficiency projects in more than 50 rural Alaskan communities with funding from 16 different Federal, State, regional and philanthropic organizations
- Oversee development of new renewable energy and energy efficiency projects, including project prioritization, feasibility work, engineering design, funding strategies, and grant applications
- Responsible for hiring, team development, strategic planning, process improvement, coordination with internal departments and external partners and funding agencies.

Policy Researcher / Data Scientist, Cold Climate Housing Research Center (2012-2020)

- Develop and update energy efficiency standards for Alaska, including commercial and residential new construction standards, energy rating software standards, and residential renewable energy modeling software standards
- Conduct energy and economic analyses of energy efficiency programs and standards in Alaska, including Home Energy Rebate Program, low-income Weatherization Assistance Program, Village Energy Efficiency Program, Alaska Building Energy Efficiency Standard
- Conduct economic analyses of renewable energy and energy efficiency projects
- Contribute to project development: generate ideas for new projects, write scopes of work, create budgets, and assist with grant applications
- Use Python / Pandas, SQL, and Excel to perform complex quantitative analyses of commercial and residential energy cost and consumption data
- Contribute to the development of energy software tools such as [AkWarm](#), [BMON Building Monitoring System](#), [Alaska Mini-Split Heat Pump Calculator](#), etc.

Science Teacher, Cook Inlet Tribal Council, Inc. (2007-2012)

- Develop and teach culturally relevant curricula for Alaska Native students in the Anchorage School District.

Certifications, Areas of Expertise, and Tools

Certified Energy Manager		Python / Pandas		SQL		BEopt
AkWarm-R and AkWarm-C		Alaska Retrofit Information System				Tableau

Education

University of Alaska Southeast (2008-2010)

Sitka, AK / Distance

Master of Arts in Teaching

Cumulative GPA: 3.97 / 4.00

Stanford University (2000-2004)

Stanford, CA

B.S. in Earth Systems

Cumulative GPA: 3.65/4.00

Coursework includes: environmental policy, economics, energy efficiency, renewable energy

Additional Educational Experiences

University of California, Berkeley: InArch Summer Institute (2011)

Berkeley, California

Learned architectural design principles and became proficient in digital and analog tools, including Rhino 3D, Adobe Products (Illustrator, Photoshop, InDesign), physical modeling and hand drafting.

Additional Leadership Experience

Founder, Alaska Midnight Sun Tango Camp, LLC (2018-Present)

Anchorage, AK

Board Member, Alaska Center for Appropriate Technology (2019-2021)

Southcentral Alaska

Board Member Alternate, Railbelt Reliability Council Implementation Committee (2021-2022)

Alaska

Awards

2021 Federal Energy and Water Management Award

2021 ANTHC Employee of the Year

Selected Presentations and Publications

Madden, D. (2023). *Using Renewable Energy to Subsidize Water and Sewer Systems in Rural Alaska*. Alaska Tribal Conference on Environmental Management.

Muradur Rashedin, Barbara Johnson, Subhabrata Dev, Erin Whitney, Jennifer Schmidt, Dustin Madden, and Srijan Aggarwal (2022). *Rural Alaska Water Treatment and Distribution Systems Incur High Energy Costs: Identifying Energy Drivers Using Panel Data Analysis for 78 Communities*. ACS ES&T Water **2022** 2 (12), 2668-2676. DOI: 10.1021/acsestwater.2c00417

Wiltse, N., Madden, D., (2019). [Home Energy Rebate Program Impacts Report and Weatherization Program Impacts Report](#). Cold Climate Housing Research Center.

Madden, D. (2019). [Energy Efficiency Measures Implemented in the Home Energy Rebate Program](#). Cold Climate Housing Research Center.

Wiltse, N., Madden, D. (2018). [2018 Alaska Housing Assessment](#). Cold Climate Housing Research Center.

Madden, D. (2017). [Building 6 Star Homes in Southcentral Alaska](#). 2017 EE Now Conference.

Hill, D., Badger, C., Wiltse, N., Madden, D. (2016). [Energy Efficiency Program Evaluation and Financing Needs Assessment](#). Vermont Energy Investment Corporation and Cold Climate Housing Research Center.

Jeremy L. Kasper, Ph.D.

Director, Alaska Center for Energy and Power
Marine Scientist, Pacific Northwest National Laboratory, Coastal Sciences Division
University of Alaska Fairbanks, Room 405 Usibelli
1764 Tanana Loop, Fairbanks, AK 99775-5860
Phone: 907-474-5194; Fax: 907-474-7041; Email: jlkasper@alaska.edu

Professional Preparation

University of Alaska Fairbanks
Reed College

Oceanography
Physics

Ph. D., 2010
B. A., 1999

Recent Professional Appointments

2023 – present Director, Alaska Center for Energy and Power
2022 – 2023 Interim Director, Alaska Center for Energy and Power
2020 – present Marine Scientist, Pacific Northwest National Laboratory
2019 – 2023 Research Associate Professor, Alaska Center for Energy and Power
2018 – 2022 Deputy Director of Research, Alaska Center for Energy and Power
2014 – 2022 Program Director, Alaska Hydrokinetic Energy Research Center
2014– 2022 Co-Director, Pacific Marine Energy Center
2018 – 2019 Research Associate Professor, Institute of Northern Engineering

Recent Relevant Published Research Products (Reports, Publications and Data Sets)

1. Wilson, M., T. Ravens, A. King, E. Brown, J. Kasper, *in press*, Site Suitability Analysis of Riverine Hydrokinetic Energy Resources on the Kuskokwim River, Alaska, *Renewable Energy*
2. Dallman, A.R et al. 2021, Overcoming Wave Energy Converter (WEC) Grid Integration Challenges: Coupling Wave Forecasting, WEC Array Controls, and Power Production, Sandia Report SAND2022-13615. Sandia National Laboratories, Albuquerque, NM.
3. Coe, R.G., et al. 2021, Modeling and predicting power from a WEC array, *OCEANS 2021: San Diego – Porto*, 2021, pp. 1-10, doi: 10.23919/OCEANS44145.2021.9706128.
4. Marsik, T., R. Bickford, C. Dennehy, R. Garber-Slaght, J. Kasper. 2021, Impact of Intake and Exhaust Ducts on the Recovery Efficiency of Heat Recovery Ventilation Systems. *Energies* 14, no. 2: 351. <https://doi.org/10.3390/en14020351>
5. *Browning, E.A.**, J. L. Kasper, P. X. Duvoy, and E. J. Brown, 2021, A time series and spectral analysis of turbulence effects on current energy converter power generation. *Proc. Eur. Wave Tidal Energy Conf.*, vol. 99775, pp. 2091-1-2090–9.
6. *Wise, M.**, M. Al-Badri, B. Loeffler and J. Kasper, 2021, A Novel Vertically Oscillating Hydrokinetic Energy Harvester. 2021 IEEE Conference on Technologies for Sustainability (SusTech), pp. 1-8, doi: 10.1109/SusTech51236.2021.9467425.
7. Kulchitsky, A., J. Johnson, J. Kasper, P. Duvoy, 2019, Integrated DEM and SPH Model of Woody Debris Interaction with River Infrastructure. *Proceedings of the 8th International Conference on Discrete Element Methods*.
8. Date Set: Igiugig Village Council, 2017, Next Generation RivGen Power System: Kvichak River, AK Overwinter Ice Study [data set]. Retrieved from <https://dx.doi.org/10.15473/1492960>.
9. *Tschetter, T.**, J. L. Kasper and P. X. Duvoy, 2016, Yakutat Area Wave Resource Assessment, Final Report to the Alaska Energy Authority, 37 pp.
10. Kasper, J. L., J. B. Johnson, P. X. Duvoy, N. Konefal, and J. Schmid, 2015, A Review of Debris Detection Methods, Northwest National Marine Renewable Energy Center, U. S. Department of Energy Report, 15 pp.



Governor Mike Dunleavy
STATE OF ALASKA

May 18, 2023

U.S. Department of Energy
Grid Deployment Office
1000 Independence Avenue SW
Washington, D.C. 20585

RE: Letter of Commitment for Funding Opportunity Announcement (FOA) no. DE-FOA-0002740, titled "BIL – Grid Resilience and Innovation Partnership (GRIP)" Topic Area 3: Rural Alaska Microgrid Transformation
Concept Paper Identification Code: TA3-015-E

Dear Grid Deployment Office,

The State of Alaska's, Alaska Energy Authority (AEA) is pleased to submit for the funding opportunity (DE-FOA-0002740) "Rural Alaska Microgrid Transformation".

AEA is a public corporation of the State of Alaska governed by a board of directors with the mission to "reduce the cost of energy in Alaska". AEA is the state's energy office and lead agency for statewide energy policy and program development.

From the North Slope, and the Aleutians, to the remote Interior, and the islands of Southeast, this funding offers a unique opportunity to extend grid-transformation across a population of more than 85,000 residents in rural Alaska. AEA will solicit request for applications from rural Alaska utilities that are eligible to transform their electric generation system from diesel to renewable sources. The benefits will be realized by disadvantaged communities throughout Alaska, with over 95 percent of the 200 rural communities which AEA serves being a majority Alaska Native population.

The State of Alaska strongly supports AEA's Rural Alaska Microgrid Transformation application. AEA will work with partners to provide the required matching funds, up to \$250 million, through loans, utility funds, private entities, and from the State of Alaska, subject to legislative approval.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mike Dunleavy".

Mike Dunleavy
Governor



ONE SEALASKA PLAZA, SUITE 200 • JUNEAU, ALASKA 99801
TEL (907) 586-1325 • FAX (907) 463-5480 • WWW.AKML.ORG

Member of the National League of Cities and the National Association of Counties

To: Curtis Thayer, Alaska Energy Authority

RE: GRIP - Transforming Rural Alaska Microgrids

May 9, 2023

The Alaska Municipal League (AML) is a member-based service organization that works to strengthen Alaska's 165 cities and boroughs. AML is a committed partner of this project, including to conduct a large portion of the work that is focused on the implementation of the Community Benefits Plan. AML has responded to Executive Order 14008 and the federal prioritization of tackling climate change, environmental justice, and inequity by providing a suite of services that help local governments meet associated goals. AEA can count on AML member services that include:

1. Review of available federal indices that provide criteria related to disadvantage, including the Justice 40 map and database, DOE's Energy Justice tool, and EPA's EJScreen.
2. AML staff can provide an equity assessment prior to or at the outset of a project, to ensure that more than 40% of project benefits are directed toward low-income and disadvantaged communities.
3. AML will include project sponsors in outreach to university and labor apprenticeships, skills training, and workforce development opportunities through an established network.
4. AML has initiated a broadly applicable engagement with the Alaska AFL-CIO to ensure that project sponsors have access to trade unions in the state, are able to commit to ensuring the free and fair opportunity to join a union, and include appropriate wage and benefit direction within their project.
5. AML will review applicable federal guidance on public engagement to ensure that project design and implementation includes appropriate and robust public participation.
6. AML will develop a model statement of policy and procedures that can be utilized by project sponsors to reflect commitments to diversity, equity, inclusion, and access. AML staff will be available to consult on implementation and adoption by project sponsors.
7. AML will manage the energy cohorts and ensure a robust program of technical assistance and capacity building is in place to support project beneficiaries, including through partnerships.

AML has in place the necessary compliance and subrecipient protocols in place to manage federal funds and to respond to AEA's reporting and grant management needs. We have submitted the required subrecipient budget justification, as well. AML staff work regularly with municipal officials in Alaska communities and depend on them to provide input into AML processes reflective of the needs of local governments. Over the last several years, AML has played a significant role in strengthening the effectiveness of federal and state relief and investment into Alaska local governments and Tribes.

AML is pleased to make this commitment and is looking forward to the completion of a successful project.

Sincerely,

Nils Andreassen
Executive Director



May 10, 2023

To Whom It May Concern:

On behalf of the Alaska Native Tribal Health Consortium (ANTHC), please accept this letter expressing ANTHC's commitment to partner with the Alaska Energy Authority (AEA) on the proposed "Transforming Rural Alaska Microgrids" project. If funded, ANTHC will serve as a subrecipient of funding awarded to AEA under the Department of Energy (DOE) Grid Resilience and Innovation Partnerships (GRIP) Program, opportunity #DE-FOA-0002740.

Through this partnership with AEA, ANTHC will ensure that project benefits are made accessible to Alaska Native villages and that these benefits are distributed equitably to Alaska Native communities. Should DOE elect to fund AEA's proposal, ANTHC is prepared to devote Rural Energy Program personnel time to the following project tasks:

1. Participating cooperatively with both the Alaska Municipal League (AML) and AEA in program design, including developing the application process, evaluation criteria, and the initial midway program evaluation;
2. Providing ongoing outreach to Tribal governments and other Tribal entities across the State of Alaska to ensure that Tribal Stakeholders are aware of the opportunities offered through the program and remain engaged throughout the project development and implementation process;
3. Creation of an easy-to-access technical assistance program - modeled after ANTHC's current partnership with the DOE Office of Indian Energy and the Denali Commission – whereby the Rural Energy Program will provide technical assistance to prospective program applicants including, but not limited to, initial evaluations of project feasibility (technical and economic), HOMER microgrid modeling, existing energy infrastructure evaluation, economic modeling and renewable resource assessments;
4. Facilitation of quarterly working group meetings for sub grantee cohorts where subgrantees can share best practices for project management and implementation, receive support helping ensure they can meet all Federal reporting requirements, and grow their respective technical and project management capacity; and
5. Working cooperatively with the Alaska Center for Energy and Power (ACEP) to conduct two techno-economic evaluations of the proposed program's results, one at the projects midway point and another at its conclusion.

The Rural Energy Program at ANTHC routinely works with communities and local stakeholders to make public health services more affordable through diverse energy projects. ANTHC is eager to lend its expertise and input to assist AEA in implementing this exciting opportunity for our Tribal partners.

Sincerely,

David Beveridge
David Beveridge
ANTHC Vice President of Environmental Health, Engineering, & Facilities Services

Alaska Native Tribal Health Consortium
4000 Ambassador Drive, Anchorage, Alaska 99508
Main: (907) 729-1900 | Fax: (907) 729-1901 | anthc.org



May 17, 2023

Secretary Jennifer Granholm
Department of Energy
1000 Independence Ave SW
Washington, D.C. 20585

RE: DE-FOA-0002740 – Alaska Energy Authority

Secretary Granholm,

AEA's *Transforming Alaska's Rural Microgrids* project is aligned with the work of the Alaska Center for Energy and Power's (ACEP) work to increase the adoption of carbon-reducing energy technologies and lower energy costs in rural Alaska communities, many of which are considered disadvantaged. Therefore, ACEP strongly supports this project, knowing the difference it will make for stakeholders that we work with, and residents in our rural communities.

The University of Alaska Fairbanks' Alaska Center for Energy and Power is an applied research organization specializing in research on islanded microgrid systems in Alaska. Since its establishment in 2008, ACEP has worked closely with AEA, AML and ANTHC as well as other state, local and federal entities to carry out and document successful renewable energy projects throughout the state. This includes working with AEA on efforts such as the Renewable Energy Fund and the Emerging Energy Technology Fund, which helped propel the deployment of renewable energy in the state.

Specifically if this is funded, ACEP could work with AEA and project partners on the following topics:

- 1) Program Design
- 2) Techno-Economic Studies
- 3) Dynamical Studies
- 4) Data Collection and Analytics
- 5) Project Identification and Development
- 6) Testing and Evaluation of Technologies in ACEP's Energy Technology Facility
- 7) Developing metrics and methods for ensuring replicability and scaling of efforts
- 8) Dissemination of Project Outcomes through means such as technical reports; video and other methods of storytelling and peer-reviewed publications

As an entity that works closely with AEA and to address the needs of rural communities, we know full-well that there is immense need for which current resources are simply insufficient. AEA's approach to grid resilience is responsive to both, and we believe that AEA is capable of delivering on its goals and objectives effectively, including through close cooperation with organizations like ours.

Respectfully,

Jeremy Kasper, PhD
Director
Alaska Center for Energy and Power
University of Alaska Fairbanks

Alaska Center for Energy and Power • University of Alaska Fairbanks • 1764 Tanana Loop – ELIF Suite 404
P.O. Box 755910 • Fairbanks, Alaska 99775-5910 • Tel: (907) 474-5402 • Fax: (907) 474-5475





May 12, 2023

Secretary Jennifer Granholm
U.S. Department of Energy
Grid Deployment Office
1000 Independence Ave., SW
Washington, DC 20585

RE: Letter of Commitment for Topic Area 3: Rural Alaska Microgrid Transformation

Secretary Granholm,

The Alaska Industrial Development and Export Authority (AIDEA) fully supports the application of the Alaska Energy Authority (AEA), *Transforming Alaska's Rural Microgrids*. AEA is known for its expertise in delivering technical assistance and critical projects in rural Alaska, which we know to result in improved living conditions. AEA is a strong partner with a robust system of evaluation and analysis that can be applied to the delivery of this project.

AIDEA is a public corporation of the State of Alaska governed by a board of directors with the mission to provide various means of financing to promote economic growth and diversity. We do that by acting as a funding resource in partnership with other financial institutions, economic development groups and guarantee agencies. We look forward to teaming with AEA to help secure financing for projects that will transform how energy is produced in rural Alaska microgrids.

This project is aligned with our own work and the goals of the Governor to increase the adoption of carbon-reducing energy technologies and lower energy costs in rural Alaska communities, many of which are considered disadvantaged.

We strongly support this project, knowing the difference it will make for stakeholders that we work with, and residents in our rural communities.

Respectfully,

Randy Ruaro
Executive Director,
Alaska Industrial Development & Export Authority

cc: David Crane, Director, Grid Deployment Office – Office of Clean Energy Demonstrations



May 12, 2023

Secretary Jennifer Granholm
Department of Energy
1000 Independence Ave SW
Washington, D.C. 20585

RE: DE-FOA-0002740 – Alaska Energy Authority

Secretary Granholm,

The Alaska Vocational Technical Center (AVTEC) fully supports the application of the Alaska Energy Authority (AEA), *Transforming Alaska's Rural Microgrids*. AEA is known for its expertise in delivering technical assistance and critical projects in rural Alaska, which we know to result in improved living conditions. AEA is a strong partner with a robust system of evaluation and analysis that can be applied to the delivery of this project.

As an entity that works closely with AEA and to address the needs of rural communities, we know full-well that there is immense need for which current resources are simply insufficient. AEA's approach to grid resilience is responsive to both, and we believe that AEA is capable of delivering on its goals and objectives effectively, including through close cooperation with organizations like ours.

AVTEC is the State of Alaska's agency that provides post-secondary career and technical workforce training and has been collaborating with the AEA for many years to deliver power generation training to Alaskans from rural villages across the state. The programs at AVTEC are accredited by the Council on Occupational Education (COE), a demonstration of quality in training. We have the ability to enhance our workforce development capacity with the curriculum needed to train Alaskans to deploy the energy systems of the future and with a student completion of training rate of over 90%, AVTEC has the expertise to serve a diverse student population to success.

We are excited at the possibility to partner with AEA on this project and bring our curriculum flexibility and student service expertise to provide the workforce training that will be necessary to achieve resilience in Alaska's rural and disadvantaged communities.

This project is aligned with our work to increase the adoption of carbon-reducing energy technologies and lower energy costs in rural Alaska communities, many of which are considered disadvantaged. We strongly support this project, knowing the difference it will make for stakeholders that we work with, and residents in our rural communities.

Respectfully,



6507DD5B990844A...
Cathy LeCompte, Director

AVTEC
809 2nd Avenue/P.O. Box 889
Seward, AK 99664

Cc: David Crane, Director, Grid Deployment Office – Office of Clean Energy Demonstrations



809 Second Avenue, P.O. Box 889
Seward, AK 99664



phone: (907) 224-3322
fax: (907) 224-4400



www.avtec.edu
 



Tungwenuk Family Qupak Design, used with permission

KAWERAK, INC.

REPRESENTING

Brevig Mission

Sitaisaq

Council

Akauchak

Diomedea

Iqaliq

Elim

Neviarcurarluk

Gambell

Sivuqaq

Golovin

Chinik

King Island

Ugiuvak

Koyuk

Kuuyuk

Mary's Igloo

Iglaruk

Nome Eskimo

Sitnasuami Inuit

Savoonga

Sivungaq

Shaktolik

Saktuliq

Shishmaref

Kigiqtaq

Solomon

Aquutaq

St. Michael

Taciq

Stebbins

Tapraq

Teller

Tupqaqruk

Unalakleet

Uqalaqtiq

Wales

Kinjigin

White Mountain

Natchigvik

May 12, 2023

Secretary Jennifer Granholm

Department of Energy

1000 Independence Ave SW

Washington, D.C. 20585

RE: DE-FOA-0002740 – Alaska Energy Authority

Secretary Granholm,

Kawerak, Inc. is in support of the application of the Alaska Energy Authority (AEA), *Transforming Alaska's Rural Microgrids*. AEA is known for its expertise in delivering technical assistance and critical projects in rural Alaska, which we know to result in improved living conditions. AEA is a strong partner with a robust system of evaluation and analysis that can be applied to the delivery of this project.

As an entity that works closely with AEA to address the needs of rural communities, we know that there is immense need for which current resources are simply insufficient. AEA's approach to grid resilience is responsive to both, and we believe that AEA can deliver on its goals and objectives effectively, including through close cooperation with organizations like ours.

Kawerak, Inc. is a non-profit tribal consortium representing twenty Alaska Native tribes in the Bering Strait Region. Kawerak manages the Bering Strait Development Council, which is the regional entity that develops the Community Economic Development Strategy (CEDS) for our region. As part of our 2021-2026 CEDS report, improving, expanding, and upgrading our region's infrastructure, including energy systems, is a high priority for our communities.

This project is aligned with our own work to improve infrastructure and reduce energy burden in rural Alaska communities. Specifically, Kawerak's 2022-2026 Strategic Plan focuses on growing community infrastructure and advocating for effective renewable energy systems in every community.

We strongly support this project, knowing the difference it will make for stakeholders that we work with, and residents in our rural communities. Thank you for your consideration of this proposal.

Respectfully,

Melanie Bahnke

Melanie Bahnke

CEO/President

Cc: David Crane, Director, Grid Deployment Office – Office of Clean Energy Demonstrations

KAWERAK, INC.

PO Box 948 • Nome Alaska 99762 • 907.443.5231 • www.kawerak.org

Advancing the capacity of our people and tribes for the benefit of the region.



612 W. Willoughby Ave., Suite B
P.O. Box 21989, Juneau, AK 99802
Phone (907) 586-4360
www.seconference.org
Email info@seconference.org

SOUTHEAST ALASKA REGIONAL DEVELOPMENT ORGANIZATION

May 3, 2023

Secretary Jennifer Granholm
Department of Energy
1000 Independence Ave SW
Washington, D.C. 20585
RE: DE-FOA-0002740 – Alaska Energy Authority

Dear Secretary Granholm:

Southeast Conference supports application of the Alaska Energy Authority (AEA), *Transforming Alaska's Rural Microgrids*.

Southeast Conference is the State of Alaska Regional Development Organization for Southeast Alaska and the US Economic Development Administration's (EDA), designated Economic Development District (EDD) for the region. Southeast Conference is responsible for developing a Comprehensive Economic Development Strategy (CEDS) for Southeast Alaska that is designed to identify regional priorities for economic and community development. One the critical areas to Rural southeast Alaska is Energy. This project would support many of the energy objectives identified in our 2021-2025 CEDS including promoting beneficial electrification and creating energy systems that provide sustainable, affordable, renewable energy.

AEA, the State of Alaska's Energy Office, is known for its expertise in delivering technical assistance and critical projects in rural Alaska, which we know to result in improved living conditions. AEA is a strong partner with a robust system of evaluation and analysis that can be applied to the delivery of this project. As an entity that works closely with AEA and to address the needs of rural communities, we know full-well that there is immense need for which current resources are simply insufficient. AEA's approach to grid resilience is responsive to both, and we believe that AEA is capable of delivering on its goals and objectives effectively, including through close cooperation with organizations like ours.

Thank you in advance for your fullest support possible of AEA's application for Transforming Alaska's Rural Microgrids. This project will make a difference for our stakeholders and residents in our rural communities.

Sincerely,

Robert Venables
Executive Director





122 1st Avenue
Fairbanks, AK 99701
907-452-8251
www.tananachiefs.org

May 01, 2023

Secretary Jennifer Granholm
Department of Energy
1000 Independence Ave SW
Washington, D.C. 20585

RE: DE-FOA-0002740 – Alaska Energy Authority

Secretary Granholm,

Tanana Chiefs Conference fully supports the application of the Alaska Energy Authority (AEA), *Transforming Alaska's Rural Microgrids*. AEA is known for its expertise in delivering technical assistance and critical projects in rural Alaska, which we know to result in improved living conditions. AEA is a strong partner with a robust system of evaluation and analysis that can be applied to the delivery of this project.

As an entity that works closely with AEA and to address the needs of rural communities, we know full-well that there is immense need for which current resources are simply insufficient. AEA's approach to grid resilience is responsive to both, and we believe that AEA is capable of delivering on its goals and objectives effectively, including through close cooperation with organizations like ours.

Tanana Chiefs Conference is the inter-tribal consortium representing 37 federally recognized tribes across Alaska's interior. For the past 50 years, TCC has been a voice advocating for tribal sovereignty, tribal unity and the priorities of interior villages. As part of our commitment to supporting our tribes, TCC has been actively assisting with energy sovereignty and energy security projects in our region since 2008 when global oil prices took some of their steepest climbs in living memory.

Tribes in the Tanana Chiefs Conference region have been leading the state in rural microgrids with high penetration, solar-diesel-battery systems since Hughes Village Council first broke ground on their 120kW solar system in 2018. TCC is actively working on 2 large-scale solar projects in Galena and Manley Hot Springs with 7 more communities developing their own large-scale solar projects as the technology matures and becomes more wide spread. The larger goal of TCC's infrastructure department is to install community scale Solar-Battery systems in all of the microgrids in the TCC region and generate 100's of MWhs of clean, solar electricity thus providing resiliency in rural Alaska.

This project is aligned with our own work to increase the adoption of carbon-reducing energy technologies and lower energy costs in rural Alaska communities, many of which are considered disadvantaged.

We strongly support this project, knowing the difference it will make for stakeholders that we work with, and residents in our rural communities.

Respectfully,

A handwritten signature in black ink, appearing to read "Dave Pelunis-Messier".

Dave Pelunis-Messier
Infrastructure Division Director, Tanana Chiefs Conference

Cc: David Crane, Director, Grid Deployment Office – Office of Clean Energy Demonstrations

Statement of Project Objectives (SOP)

Rural Alaska Microgrid Transformation

A. OBJECTIVES

The project's objectives are multi-faceted and align with the Department's and Administration's priorities. Alaska Energy Authority's (AEA) project objectives are to reduce vulnerability, increase resilience, lower carbon emissions, decrease power costs, and improve public health and safety. These objectives are consistent with the FOA's goals to advance community benefits, which align with the State's energy policy goal to reach 80% renewable energy by 2040.

At the same time, AEA will catalyze private sector and non-federal public capital by contributing 50% of the overall project funding through non-federal funds. Projects will be developed at-scale by identifying locations where significant economic benefits can be obtained, including those that reduce the transactional costs for local businesses.

Specific objectives include to deliver projects:

- that reduce the cost per kwh by more than 10%
- that lower maintenance and operations costs
- that leverage locally sourced renewables, including wind, solar, and hydro.
- that lower the diesel fuel use by 50% or more.
- in collaboration with project partners and communities
- utilizing broad technical, economic, financial, and project management expertise
- that maximize stakeholder engagement, workforce development, and community benefits.

B. SCOPE OF WORK

The first year of the project will focus on finalizing planning and strategic development of the partnerships and program delivery, including robust stakeholder engagement and public outreach. Program requirements will be structured similar to AEA's Renewable Energy Fund, which has a grant review team and process that will efficiently review projects based on merit criteria that corresponds to GRIP priorities and AEA's goals. AEA will evaluate project contributions to meet goals of carbon and cost reduction, and available non-federal match.

AEA will complete its teaming agreement with Alaska Municipal League (AML), Alaska Native Tribal Health Consortium (ANTHC), and Alaska Center for Energy and Power (ACEP) to finalize the project components that include equity assessment, labor engagement, and implement a skills and workforce development strategy. This will result in a fully developed program, ready for a request for applications.

The program will be released for application and projects will be identified per the requirements. AEA expects to make approximately 20 subawards for transformative projects. The project partners will implement a project development support process, to provide

grantees with necessary technical assistance, and develop a cohort approach to project management. AEA will complete community benefit assessments and agreements in each project community, in collaboration with grantee and partners. AEA will evaluate project contributions to meeting goals of carbon and cost reduction, and available non-federal match.

Project awards will be reviewed based on annual monitoring, and project close-outs. Partners will hold a workshop with all awardees to determine strengths and weaknesses of the program, and to finalize analysis of goals, objectives, and outcomes. Approximately twenty communities will have had projects implemented and finalized, with expected objectives achieved. Final reporting will satisfy the terms of the agreement with DOE. The project team will report on equitable benefits delivered to communities, as well as environmental justice and climate change metrics that demonstrate outcome delivery.

C. TASKS TO BE PERFORMED

All Budget Periods

Overall Project Management and Planning

The recipient will perform project management activities to include project planning and control, financial management, data management, management of supplies and/or equipment, risk management, and reporting as required to successfully achieve the overall objectives of the project.

Task 0.0 – Project Management and Planning:

The Recipient shall develop and maintain the Project Management Plan (PMP). The content, organization, and requirements for revision of the PMP are identified in the Federal Assistance Reporting Checklist and Instructions. AEA will manage and implement the project in accordance with the PMP. The PMP shall be revised and resubmitted as often as necessary, during the course of the project, to capture any major/significant changes to the planned approach, budget, key personnel, major resources, etc.

Task 0.1- Kick-Off Meeting:

AEA will participate in a project kickoff meeting with the DOE within 30 days of project initiation.

Budget Period 1 (Year 1): Formational activities focused on partnerships and stakeholders.

Task 1.1- Partnership team roles and responsibilities finalized, project scoping

Subtask 1.1.1- AEA will finalize partner agreements with AML, ANTHC and ACEP that will outline the roles and responsibilities of each party and finalize the project scope.

Task 1.2- Stakeholder engagement and outreach

Subtask 1.2.1- AEA and partners will conduct outreach to disadvantaged, rural communities to engage decision makers and utility representatives on the program, benefits, and opportunities.

Subtask 1.2.2- AEA will initiate targeted application support by making calls, sending emails, and connecting with established contacts and offering support for existing, known projects.

Task 1.3- Application development and review process

Subtask 1.3.1- The team will develop and finalize criteria and metrics for evaluating project benefits.

Subtask 1.3.2- The team will review the program for merit and finalize the solicitation or request for applications from interested communities for microgrid transformation projects. The application and scoring criteria will be reviewed and approved by DOE before being released.

Quarter/ timeframe	Milestone	Type
1	Partners establish teaming agreements.	Progress
2,3	Program Developed	Progress
4	Program released, request for applications	Progress
FY 24	Request for Applications with feasible, impactful project selection criteria developed and approved by DOE	Go/no go

Continuation: The recipient is **NOT** authorized to initiate any scope in the next budget period without the DOE Contracting Officer's prior written approval in accordance with the award terms and conditions.

Budget Period 2 (Years 2-6): Project development and community benefit support activities

Task 2.1- Conduct request for applications:

Subtask 2.1.1- The team will review applications for completeness and alignment with project goals and objectives based on the previously developed metrics and will award high scoring projects.

Task 2.2 - Cohort development and community benefit agreements

Subtask 2.2.1 - AEA will bring project grantees together as part of a cohort, with quarterly technical support to share best practices and lessons learned, in order for the projects to develop as efficiently as possible.

Subtask 2.2.2- The team will work with representatives from the selected communities on how to structure the project to maximize community benefits.

Task 2.3 - Initiate project development and NEPA process

Subtask 2.3.1 - AEA will work with the selected rural communities on proper NEPA documentation, final engineering, design, and permitting.

Subtask 2.3.2 - The team will conduct project financing review and work with each individual community on leveraging funding.

Quarter/ timeframe	Milestone	Measure
5	Community benefit agreements in place.	Progress
6,7	Applications received and evaluated for merit criteria	Progress
8	Approximately twenty community awards result in project implementation.	Technical
FY 25	AEA has copies of signed grant agreements for twenty projects.	Go/No Go
9-24	Projects are implemented	Technical
10	Outreach conducted	Progress
FY 26	Projects that have cleared progress criteria with completed feasibility reports are moved forward.	Go/No Go
13	Survey and interview results received and reviewed.	Progress
14	Stakeholder listening session conducted.	Progress
15	Cohort evaluation finalized.	Progress
16	Preliminary review of findings is released by the project team.	Technical
FY 27	Projects that have cleared progress criteria with completed design and permitting are moved forward.	Go/No Go
FY28	Projects that have cleared progress criteria with groundbreaking construction are moved forward.	Go/No Go
FY 29	Projects that have cleared progress criteria and are on budget and on schedule are moved forward.	Go/No Go

Continuation: The recipient is **NOT** authorized to initiate any scope in the next budget period without the DOE Contracting Officer's prior written approval in accordance with the award terms and conditions.

Budget Period 3 (Year 7): Project evaluation and analysis of outcomes.

Task 7.1- Finalize Project Awards and Activities:

Subtask 7.1.1- AEA will ensure completion of all projects through a final project inspection and will finalize reporting to DOE.

Task 7.2- Review impact of projects on goals and outcomes

Subtask 7.2.1 Partners will review goals, objectives, and outcomes against project reporting to ensure project completion and alignment with the agreed upon plan.

Subtask 7.2.2- The team will evaluate community benefit arrangements and impact by comparing outcomes against pre project data.

Task 7.3- Produce final summary of findings

Subtask 7.3.1 - The team will share findings on a public facing project website and in public forums so that the project can be easily replicated, and information can be shared with decision makers.

Subtask 7.3.3 - AEA will share findings with project partners and participating rural communities.

Quarter	Milestone	Measure	Verification
25	Survey and interview results received and reviewed.	Progress	80% response
26	Stakeholder listening session conducted.	Progress	Workshop held
27	Cohort evaluation finalized.	Progress	80% response
28	Project delivers summary of outcomes to DOE.	Technical	Document

D. DELIVERABLES

In addition to the reports specified in the "Federal Assistance Reporting Checklist," the Recipient will provide the following to the DOE Project Officer:

- Subtask 0.0 Project Management Plan (PMP)
- Subtask 1.1.1 Final Partner Agreements
- Subtask 1.3.2 Request for application and scoring criteria
- Subtask 2.1.1 Signed project agreements between AEA and 20 disadvantaged communities
- Subtask 3.1.1 NEPA documentation for each site
- Subtask 3.1.1 Engineered design documents for all construction projects
- Subtask 3.1.1 Copies of all necessary permits
- Subtask 7.1.1 Close-out documentation and final reporting
- Subtask 7.3.1 Link to public facing website with project outcomes

E. BRIEFINGS AND TECHNICAL PRESENTATIONS

- Detailed project status update briefings at events in the contiguous United States once per year and via communication/conferencing media approximately once per year. Briefings will explain the plans, progress, and results of the project.
- Technical paper(s) and presentations as appropriate at technical society meetings, or at technical exchange meetings.

Instructions and Summary

Award Number: _____
Award Recipient: Alaska Energy Authority

Date of Submission: 5/19/2023
Form submitted by: Alaska Energy Authority
(May be award recipient or sub-recipient)

Please read the instructions on each worksheet tab before starting. If you have any questions, please ask your DOE contact!
Do not modify this template or any cells for formulas!

1. If using this form for award application, negotiation, or budget revision, fill out the blank white cells in workbook tabs a. through j. with total project costs.
2. Blue colored cells contain instructions, headers, or summary calculations and should not be modified. Only blank white cells should be populated.
3. Enter detailed support for the project costs identified for each Category line item within each worksheet tab to autopopulate the summary tab.
4. The total budget presented on tabs a. through i. must include both Federal (DOE) and Non-Federal (cost share) portions.
5. All costs incurred by the preparer's sub-recipients, contractors, and Federal Research and Development Centers (FFRDCs), should be entered only in section f. Contractual. All other sections are for the costs of the preparer only.
6. Ensure all entered costs are allowable, allocable, and reasonable in accordance with the administrative requirements prescribed in 2 CFR 200, and the applicable cost principles for each entity type: FAR Part 31 for For-Profit entities; and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.
7. Add rows as needed throughout tabs a. through j. If rows are added, formulas/calculations may need to be adjusted by the preparer. Do not add rows to the Instructions and Summary tab. If your project contains more than five budget periods, consult your DOE contact before adding additional budget period rows and columns.
8. ALL budget period cost categories are rounded to the nearest dollar.

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2 - GTN, Paperwork Reduction Project (1910-5162), U.S. Department of Energy 1000 Independence Avenue, S.W., Washington, DC 20585; and to the Office of Management and Budget, Paperwork Reduction Project (1910-5162), Washington, DC 20503.

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

The values in this summary table are from entries made in subsequent tabs, only blank white cells require data entry

Section A - Budget Summary								
		Federal	Cost Share			Total Costs	Cost Share %	Proposed Budget Period Dates
Budget Period 1		\$15,883,607	\$15,883,607			\$31,906,144	49.78%	01/01/2024 - 05/30/2025
Budget Period 2		\$199,932,841	\$199,932,841			\$400,793,211	49.88%	06/01/2025 - 5/30/2030
Budget Period 3		\$32,915,003	\$32,915,004			\$65,993,813	49.88%	01/01/2030 - 12/31/2031
Budget Period 4		\$0	\$0			\$0	0.00%	
Budget Period 5		\$0	\$0			\$0	0.00%	
Total		\$248,731,451	\$248,731,452			\$498,693,168	49.88%	
Section B - Budget Categories								
CATEGORY	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Costs	% of Project	Comments (as needed)
a. Personnel	\$3,718,800	\$7,879,767	\$4,164,927	\$0	\$0	\$15,763,494	3.16%	
b. Fringe Benefits	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
c. Travel	\$366,000	\$732,000	\$366,000	\$0	\$0	\$1,464,000	0.29%	
d. Equipment	\$100,000	\$0	\$0	\$0	\$0	\$100,000	0.02%	
e. Supplies	\$80,000	\$160,000	\$80,000	\$0	\$0	\$320,000	0.06%	
f. Contractual								
Sub-recipient	\$25,766,979	\$388,562,253	\$59,398,059	\$0	\$0	\$473,727,291	94.99%	
Contractor	\$944,640	\$1,489,280	\$944,640	\$0	\$0	\$3,378,560	0.68%	
FFRDC	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Total Contractual	\$26,711,619	\$390,051,533	\$60,342,699	\$0	\$0	\$477,105,851	95.67%	
g. Construction	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
h. Other Direct Costs	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Total Direct Costs	\$30,976,419	\$398,823,300	\$64,953,626	\$0	\$0	\$494,753,345	99.21%	
i. Indirect Charges	\$929,725	\$1,969,912	\$1,040,187	\$0	\$0	\$3,939,823	0.79%	
Total Costs	\$31,906,144	\$400,793,211	\$65,993,813	\$0	\$0	\$498,693,168	100.00%	

Additional Explanation (as needed):

a. Personnel

INSTRUCTIONS - PLEASE READ!!!

1. List project costs solely for employees of the entity completing this form. All personnel costs for subrecipients and contractors must be included under f. Contractual.

2. All personnel should be identified by position title and not employee name. Enter the amount of time (e.g., hours or % of time) and the base hourly rate and the total direct personnel compensation will automatically calculate. Rate basis (e.g., rate negotiated for each hour worked on the project, labor distribution report, state civil service rates, etc.) must also be identified.

3. If loaded labor rates are utilized, a description of the costs the loaded rate is comprised of must be included in the Additional Explanation section below. DOE must review all components of the loaded labor rate for reasonableness and unallowable costs (e.g. fee or profit).

4. If a position and hours are attributed to multiple employees (e.g. Technician working 4000 hours) the number of employees for that position title must be identified.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Position Title	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Project Total Hours	Project Total Dollars	Rate Basis
		Time (Hrs)	Hourly Rate (\$/Hr)	Total Budget Period 1	Time (Hrs)	Hourly Rate (\$/Hr)	Total Budget Period 2	Time (Hrs)	Hourly Rate (\$/Hr)	Total Budget Period 3	Time (Hrs)	Hourly Rate (\$/Hr)	Total Budget Period 4	Time (Hrs)	Hourly Rate (\$/Hr)	Total Budget Period 5			
1	Sr. Engineer (EXAMPLE!!!)	2000	\$85.00	\$170,000	200	\$50.00	\$10,000	200	\$50.00	\$10,000	200	\$50.00	\$10,000	200	\$50.00	\$10,000	2400	\$190,000	
2	Technicians (2)	4000	\$20.00	\$80,000	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	4000	\$80,000	
2 thru 7	Circuit Rider Technician	195	\$67.65	\$13,192	390	\$71.67	\$27,951	195	\$75.69	\$14,760			\$0			\$0	780	\$55,903	
2 thru 7	Circuit Rider Technician	195	\$82.60	\$16,107	390	\$87.49	\$34,121	195	\$92.40	\$18,018			\$0			\$0	780	\$68,246	
2 thru 7	Circuit Rider Technician	195	\$78.27	\$15,263	390	\$82.92	\$32,339	195	\$87.56	\$17,074			\$0			\$0	780	\$64,676	
1 thru 7	Circuit Rider Technician	3900	\$78.26	\$305,214	7800	\$82.92	\$646,776	3900	\$87.56	\$341,484			\$0			\$0	15600	\$1,293,474	
1 thru 7	Comms Directors	585	\$97.28	\$56,909	1170	\$103.06	\$120,580	585	\$109.10	\$63,824			\$0			\$0	2340	\$241,313	
1 thru 7	Contracting Officer	390	\$85.15	\$33,209	780	\$90.21	\$70,364	390	\$95.75	\$37,343			\$0			\$0	1560	\$140,915	
1 thru 7	Contracting Officer	1950	\$85.15	\$166,043	3900	\$90.21	\$351,819	1950	\$95.50	\$186,225			\$0			\$0	7800	\$704,087	
1 thru 7	Director AEEE	390	\$131.04	\$51,106	780	\$138.85	\$108,303	390	\$146.85	\$57,272			\$0			\$0	1560	\$216,680	
1 thru 7	Director of Planning	195	\$103.48	\$20,179	390	\$109.63	\$42,756	195	\$118.83	\$23,172			\$0			\$0	780	\$86,106	
1 thru 7	Economist	1170	\$102.15	\$119,516	2340	\$108.22	\$253,235	1170	\$115.00	\$134,550			\$0			\$0	4680	\$507,300	
1 thru 7	Executive Director	195	\$183.43	\$35,769	390	\$194.32	\$75,785	195	\$205.22	\$40,018			\$0			\$0	780	\$151,572	
1 thru 7	GIS	780	\$78.26	\$61,043	1560	\$82.91	\$129,340	780	\$87.78	\$68,468			\$0			\$0	3120	\$258,851	
1 thru 7	Infrastructure Engineer	390	\$105.32	\$41,075	780	\$111.58	\$87,032	390	\$118.00	\$46,020			\$0			\$0	1560	\$174,127	
2 thru 7	Program Project Manager	780	\$100.08	\$78,062	1560	\$106.03	\$165,407	780	\$113.23	\$88,319			\$0			\$0	3120	\$331,789	
1 thru 7	Program Project Manager	3900	\$105.32	\$410,748	7800	\$111.58	\$870,324	3900	\$117.84	\$459,576			\$0			\$0	15600	\$1,740,648	
1 thru 7	Program Project Manager	3900	\$105.32	\$410,748	7800	\$111.58	\$870,324	3900	\$117.84	\$459,576			\$0			\$0	15600	\$1,740,648	
1 thru 7	Program Project Manager	3900	\$105.32	\$410,748	7800	\$111.58	\$870,324	3900	\$117.84	\$459,576			\$0			\$0	15600	\$1,740,648	
1 thru 7	Program Project Manager	3900	\$105.32	\$410,748	7800	\$111.58	\$870,324	3900	\$117.84	\$459,576			\$0			\$0	15600	\$1,740,648	
1 thru 7	Program Project Manager	3900	\$105.32	\$410,748	7800	\$111.58	\$870,324	3900	\$117.84	\$459,576			\$0			\$0	15600	\$1,740,648	
1 thru 7	Program Project Manager	3900	\$105.32	\$410,748	7800	\$111.58	\$870,324	3900	\$117.84	\$459,576			\$0			\$0	15600	\$1,740,648	
1 thru 7	Program Project Manager	3900	\$105.32	\$410,748	7800	\$111.58	\$870,324	3900	\$117.84	\$459,576			\$0			\$0	15600	\$1,740,648	
1 thru 7	Rural Assistance Manager	390	\$102.24	\$39,874	780	\$108.32	\$84,490	390	\$115.00	\$44,850			\$0			\$0	1560	\$169,213	
1 thru 7	Rural Programs Manager	780	\$123.12	\$96,034	1560	\$130.43	\$203,471	780	\$137.75	\$107,445			\$0			\$0	3120	\$406,949	
2 thru 7	Senior Infrastructure Engineer	390	\$110.35	\$43,037	780	\$116.97	\$91,237	390	\$124.35	\$48,497			\$0			\$0	1560	\$182,770	
1 thru 7	Chief Operating Officer	390	\$160.73	\$62,685	780	\$170.28	\$132,818	390	\$179.83	\$70,134			\$0			\$0	1560	\$265,637	
	Total Personnel Costs	36660		\$3,718,800	73320		\$7,879,767	36660		\$4,164,927	0		\$0	0		\$0	146640	\$15,763,494	

Additional Explanation (as needed):

b. Fringe Benefits

INSTRUCTIONS - PLEASE READ!!!

1. Fill out the table below by position title. If all employees receive the same fringe benefits, you can show "Total Personnel" in the Labor Type column instead of listing out all position titles.

2. The rates and how they are applied should not be averaged to get one fringe cost percentage. Complex calculations should be described/provided in the Additional Explanation section below.

3. The fringe benefit rates should be applied to all positions, regardless of whether those funds will be supported by Federal Share or Recipient Cost Share.

4. Each budget period is rounded to the nearest dollar.

Labor Type	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Total Project
	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	
EXAMPLE!!! Sr. Engineer	\$170,000	20%	\$34,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$38,000
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
Total:	\$0		\$0	\$0		\$0	\$0		\$0	\$0		\$0	\$0		\$0	\$0

A federally approved fringe benefit rate agreement, or a proposed rate supported and agreed upon by DOE for estimating purposes is required at the time of award negotiation if reimbursement for fringe benefits is requested. Please check (X) one of the options below and provide the requested information if not previously submitted.

A fringe benefit rate has been negotiated with, or approved by, a federal government agency. A copy of the latest rate agreement is/was included with the project application.*

There is not a current federally approved rate agreement negotiated and available.**

*Unless the organization has submitted an indirect rate proposal which encompasses the fringe pool of costs, please provide the organization's benefit package and/or a list of the components/elements that comprise the fringe pool and the cost or percentage of each component/element allocated to the labor costs identified in the Budget Justification (Form EERE 335.1).

**When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided in the Sample Rate Proposal at <https://www.energy.gov/eere/funding/downloads/sample-indirect-rate-proposal-and-profit-compliance-audit>, or a format that provides the same level of information and which will support the rates being proposed for use in the performance of the proposed project.

Additional Explanation (as necessary): Please use this box (or an attachment) to list the elements that comprise your fringe benefits and how they are applied to your base (e.g. Personnel) to arrive at your fringe benefit rate.

c. Travel

INSTRUCTIONS - PLEASE READ!!!

1. Identify Foreign and Domestic Travel as separate items. Examples of Purpose of Travel are subrecipient site visits, DOE meetings, project mgmt. meetings, etc. Examples of Basis for Estimating Costs are past trips, travel quotes, GSA rates, etc.

2. All listed travel must be necessary for performance of the Statement of Project Objectives.

3. Only travel that is directly associated with this award should be included as a direct travel cost to the award.

4. Federal travel regulations are contained within the applicable cost principles for all entity types.

5. Travel costs should remain consistent with travel costs incurred by an organization during normal business operations as a result of the organizations written travel policy. In absence of a written travel policy, organizations must follow the regulations prescribed by the General Services Administration.

6. Columns E, F, G, H, I, J, and K are per trip.

7. The number of days is inclusive of the day of departure and the day of return.

8. Recipients should enter City and State (or City and Country for International travel) in the Depart from and Destination fields.

9. Each budget period is rounded to the nearest dollar.

SOPO Task #	Purpose of Travel	Depart From	Destination	No. of Days	No. of Travelers	Lodging per Traveler	Flight per Traveler	Vehicle per Traveler	Per Diem Per Traveler	Cost per Trip	Basis for Estimating Costs
	Domestic Travel	Budget Period 1									
1	EXAMPLE!!! Visit to PV manufacturer			2	2	\$250	\$500	\$100	\$160	\$2,020	Current GSA rates
2	Rural site visits 3 trips per year per site; 2 people per trip - Assume 20 sites. Rural travel estimated at \$1,500 per trip with an overnight stay.	ANC	Rural Alaska	2	240	\$250	\$1,100		\$150	\$360,000	Previous experience
2	One out of state conference per year	ANC	Out of state	5	2	\$1,000	\$1,500		\$500	\$6,000	Previous experience
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 1 Total									\$366,000	
	Domestic Travel	Budget Period 2									
3 thru 6	Rural site visits 3 trips per year per site; 2 people per trip - Assume 20 sites. Rural travel estimated at \$1,500 per trip with an overnight stay.	ANC	Rural Alaska	2	480	\$250	\$1,100		\$150	\$720,000	Previous experience
3 thru 6	One out of state conference per year	ANC	Out of state	5	4	\$1,000	\$1,500		\$500	\$12,000	Previous experience
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 2 Total									\$732,000	
	Domestic Travel	Budget Period 3									
7	Rural site visits 3 trips per year per site; 2 people per trip - Assume 20 sites. Rural travel estimated at \$1,500 per trip with an overnight stay.	ANC	Rural Alaska	2	240	\$250	\$1,100		\$150	\$360,000	Previous experience
7	One out of state conference per year	ANC	Out of state	5	2	\$1,000	\$1,500		\$500	\$6,000	Previous experience
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 3 Total									\$366,000	
	Domestic Travel	Budget Period 4									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 4 Total									\$0	
	Domestic Travel	Budget Period 5									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 5 Total									\$0	
	PROJECT TOTAL									\$1,464,000	

Additional Explanation (as needed): Rural project sites are unknown. 3 trips per year to each project site, 2 people per trip. Typically it will be a project manager and circuit rider to inspect the project progress and offer any training opportunities

d. Equipment

INSTRUCTIONS - PLEASE READ!!!

1. Equipment is generally defined as an item with an acquisition cost greater than \$5,000 and a useful life expectancy of more than one year. Please refer to the applicable Federal regulations in 2 CFR 200 for specific equipment definitions and treatment.

2. List all equipment below, providing a basis of cost (e.g. contractor quotes, catalog prices, prior invoices, etc.). Briefly justify items as they apply to the Statement of Project Objectives. If it is existing equipment, provide logical support for the estimated value shown.

3. During award negotiations, provide a contractor quote for all equipment items over \$50,000 in price. If the contractor quote is not an exact price match, provide an explanation in the additional explanation section below. If a contractor quote is not practical, such as for a piece of equipment that is purpose-built, first of its kind, or otherwise not available off the shelf, provide a detailed engineering estimate for how the cost estimate was derived.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Equipment Item	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
3,4,5	EXAMPLE!!! Thermal shock chamber	2	\$70,000	\$140,000	Vendor Quote - Attached	Reliability testing of PV modules- Task 4.3
	Office set-up	10	\$10,000	\$100,000	Previous experience	10 new staff office set-up
				\$0		
				\$0		
				\$0		
				\$0		1,2
				\$0		
	Budget Period 1 Total			\$100,000		
Budget Period 2						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 2 Total			\$0		
Budget Period 3						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 3 Total			\$0		
Budget Period 4						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 4 Total			\$0		
Budget Period 5						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 5 Total			\$0		
	TOTAL EQUIPMENT			\$100,000		

Additional Explanation (as needed):

e. Supplies

INSTRUCTIONS - PLEASE READ!!!

1. Supplies are generally defined as an item with an acquisition cost of \$5,000 or less and a useful life expectancy of less than one year. Supplies are generally consumed during the project performance. Please refer to the applicable Federal regulations in 2 CFR 200 for specific supplies definitions and treatment.

2. List all proposed supplies below, providing a basis of costs (e.g. contractor quotes, catalog prices, prior invoices, etc.). Briefly justify the need for the Supplies as they apply to the Statement of Project Objectives. Note that Supply items must be direct costs to the project at this budget category, and not duplicative of supply costs included in the indirect pool that is the basis of the indirect rate applied for this project.

3. Multiple supply items valued at \$5,000 or less used to assemble an equipment item with a value greater than \$5,000 with a useful life of more than one year should be included on the equipment tab. If supply items and costs are ambiguous in nature, contact your DOE representative for proper categorization.

4. Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
4,6	EXAMPLE!!! Wireless DAS components	10	\$360.00	\$3,600	Catalog price	For Alpha prototype - Task 2.4
1,2	Misc. Supplies	40	\$2,000.00	\$80,000	Previous experience	20 staff members - \$2,000/pp per year
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
Budget Period 1 Total				\$80,000		
Budget Period 2						
3 thr 6	Misc. Supplies	80	\$2,000.00	\$160,000	Previous experience	20 staff members - \$2,000/pp per year
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
Budget Period 2 Total				\$160,000		
Budget Period 3						
7	Misc. Supplies	40	\$2,000.00	\$80,000	Previous experience	20 staff members - \$2,000/pp per year
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
Budget Period 3 Total				\$80,000		
Budget Period 4						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
Budget Period 4 Total				\$0		
Budget Period 5						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
Budget Period 5 Total				\$0		
TOTAL SUPPLIES				\$320,000		

Additional Explanation (as needed):

f. Contractual

INSTRUCTIONS - PLEASE READ!!!

1. The entity completing this form must provide all costs related to sub-recipients, contractors, and FFRDC partners in the applicable boxes below.
2. Sub-recipients (partners, sub-awardees): Subrecipients shall submit a Budget Justification describing all project costs and calculations when their total proposed budget exceeds either (1) \$100,000 or (2) 25% of total award costs. These sub-recipient forms may be completed by either the sub-recipients themselves or by the preparer of this form. The budget totals on the sub-recipient's forms must match the sub-recipient entries below. A subrecipient is a legal entity to which a subaward is made, who has performance measured against whether the objectives of the Federal program are met, is responsible for programmatic decision making, must adhere to applicable Federal program compliance requirements, and uses the Federal funds to carry out a program of the organization. All characteristics may not be present and judgment must be used to determine subrecipient vs. contractor status.
3. Contractors: List all contractors supplying commercial supplies or services used to support the project. For each Contractor cost with total project costs of \$100,000 or more, a Contractor quote must be provided. A contractor is a legal entity contracted to provide goods and services within normal business operations, provides similar goods or services to many different purchasers, operates in a competitive environment, provides goods or services that are ancillary to the operation of the Federal program, and is not subject to compliance requirements of the Federal program. All characteristics may not be present and judgment must be used to determine subrecipient vs.contractor status.
4. Federal Funded Research and Development Centers (FFRDCs): FFRDCs must submit a signed Field Work Proposal during award application. The award recipient may allow the FFRDC to provide this information directly to DOE, however project costs must also be provided below.
5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Sub-Recipient Name/Organization	Sub-Recipient Unique Entity Identifier (UEI)	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
2,4	EXAMPLE!!! XYZ Corp.		Partner to develop optimal lens for Gen 2 product. Cost estimate based on personnel hours.	\$48,000	\$32,000	\$16,000			\$96,000
1 thru 7	Anchorage Municipal League (AML)		Cost estimate based on personnel hours	\$128,049	\$889,724	\$150,871			\$1,168,644
1 thru 7	Alaska Center for Energy and Power (ACEP)		Cost estimate based on personnel hours	\$138,930	\$927,529	\$163,806			\$1,230,265
1 thru 7	Alaska Native Tribal Health Consortium (ANTHC)		Cost estimate based on personnel hours	\$500,000	\$495,000	\$333,382			\$1,328,382
2 thru 7	Rural Alaskan Community/Village/Tribe/Utility		Future request for proposal and potential projects know to AEA	\$25,000,000	\$386,250,000	\$58,750,000			\$470,000,000
									\$0
									\$0
									\$0
									\$0
									\$0
			Sub-total	\$25,766,979	\$388,562,253	\$59,398,059	\$0	\$0	\$473,727,291

SOPO Task #	Contractor Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
6	EXAMPLE!!! ABC Corp.	Contractor for developing robotics to perform lens inspection. Estimate provided by contractor.	\$32,900	\$86,500				\$119,400
1 thru 7	IIJA Program Coordinator	15 hours/month @ 124/hour. Coordination of all IIJA programs across the agency	\$44,640	\$89,280	\$44,640			\$178,560
2,3,4,5	State of Alaska Department of Natural Resouces	Permitting	\$200,000	\$400,000	\$200,000			\$800,000
2,3,7	Economist	Competitive bid. Analysis of applications and awards, program evaluation support	\$200,000		\$200,000			\$400,000
1 thru 7	Outreach	Competitive bid. Program specific outreach and report development	\$100,000	\$200,000	\$100,000			\$400,000
2,3,7	Engineering Support	Competitice bid. Engineering service for application review, technical feasibility, design review.	\$200,000	\$400,000	\$200,000			\$800,000
2,3,4,5	Legal Services	State of Alaska or competitive bid	\$100,000	\$200,000	\$100,000			\$400,000
1,2,3,4,5	State of Alaska Department of Law	Internal legal services	\$100,000	\$200,000	\$100,000			\$400,000
		Sub-total	\$944,640	\$1,489,280	\$944,640	\$0	\$0	\$3,378,560

SOPO Task #	FFRDC Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

Total Contractual	\$26,711,619	\$390,051,533	\$60,342,699	\$0	\$0	\$477,105,851
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Additional Explanation (as needed):

g. Construction

PLEASE READ!!!

1. Construction, for the purpose of budgeting, is defined as all types of work done on a particular building, including erecting, altering, or remodeling. Construction conducted by the award recipient is entered on this page. Any construction work that is performed by a contractor or subrecipient should be entered under f. Contractual.

2. List all proposed construction below, providing a basis of cost such as engineering estimates, prior construction, etc., and briefly justify its need as it applies to the Statement of Project Objectives.

3. Each budget period is rounded to the nearest dollar.

Overall description of construction activities: **Example Only!!! - Build wind turbine platform**

SOPO Task #	General Description	Cost	Basis of Cost	Justification of need
Budget Period 1				
3	EXAMPLE ONLY!!! Three days of excavation for platform site	\$28,000	Engineering estimate	Site must be prepared for construction of platform.
	Budget Period 1 Total	\$0		
Budget Period 2				
	Budget Period 2 Total	\$0		
Budget Period 3				
	Budget Period 3 Total	\$0		
Budget Period 4				
	Budget Period 4 Total	\$0		
Budget Period 5				
	Budget Period 5 Total	\$0		
	TOTAL CONSTRUCTION	\$0		

Additional Explanation (as needed):

h. Other Direct Costs

INSTRUCTIONS - PLEASE READ!!!

1. Other direct costs are direct cost items required for the project which do not fit clearly into other categories. These direct costs must not be included in the indirect costs (for which the indirect rate is being applied for this project). Examples are: tuition, printing costs, etc. which can be directly charged to the project and are not duplicated in indirect costs (overhead costs).

2. Basis of cost are items such as vendor quotes, prior purchases of similar or like items, published price list, etc.

3. Each budget period is rounded to the nearest dollar.

SOPO Task #	General Description and SOPO Task #	Cost	Basis of Cost	Justification of need
Budget Period 1				
5	EXAMPLE!!! Grad student tuition - tasks 1-3	\$16,000	Established UCD costs	Support of graduate students working on project
	Budget Period 1 Total	\$0		
Budget Period 2				
	Budget Period 2 Total	\$0		
Budget Period 3				
	Budget Period 3 Total	\$0		
Budget Period 4				
	Budget Period 4 Total	\$0		
Budget Period 5				
	Budget Period 5 Total	\$0		
	TOTAL OTHER DIRECT COSTS	\$0		

Additional Explanation (as needed):

i. Indirect Costs

INSTRUCTIONS - PLEASE READ!!!

1.

Fill out the table below to indicate how your indirect costs are calculated. Use the box below to provide additional explanation regarding your indirect rate calculation.

2.

The rates and how they are applied should not be averaged to get one indirect cost percentage. Complex calculations or rates that do not do not correspond to the below categories should be described/provided in the Additional Explanation section below. If questions exist, consult with your DOE contact before filling out this section.

3.

The indirect rate should be applied to both the Federal Share and Recipient Cost Share.

4.

NOTE: A Recipient who elects to employ the 10% de minimis Indirect Cost rate **cannot claim resulting cost as a Cost Share contribution, nor can the Recipient claim "unrecovered indirect costs" as a Cost Share contribution**. Neither of these costs can be reflected as actual indirect cost rates realized by the orgnaization, and therefore are not verifiable in the Recipient records as required by Federal Regulation (200.306(b)(1))

5..

Each budget period is rounded to the nearest dollar.

	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total	Explanation of BASE
Provide ONLY Applicable Rates:							
Overhead Rate	0.00%	0.00%	0.00%	0.00%	0.00%		Example: Labor + Fringe
General & Administrative (G&A)	0.00%	0.00%	0.00%	0.00%	0.00%		
FCCM Rate, if applicable	0.00%	0.00%	0.00%	0.00%	0.00%		
OTHER Indirect Rate	25.00%	25.00%	25.00%	0.00%	0.00%		
Indirect Costs (As Applicable):							
Overhead Costs	\$929,725	\$1,969,912	\$1,040,187			\$3,939,823	
G&A Costs						\$0	
FCCM Costs, if applicable						\$0	
OTHER Indirect Costs						\$0	
Total indirect costs requested:	\$929,725	\$1,969,912	\$1,040,187	\$0	\$0	\$3,939,823	

A federally approved indirect rate agreement, or rate proposed (supported and agreed upon by DOE for estimating purposes) is required if reimbursement of indirect costs is requested. Please check (X) one of the options below and provide the requested information if it has not already been provided as requested, or has changed.

An indirect rate has been approved or negotiated with a federal government agency. A copy of the latest rate agreement is included with this application and will be provided electronically to the Contracting Officer for this project.

X

The organization does not have a current, federally approved indirect cost rate agreement and has provided an indirect rate proposal in support of the proposed costs.

X

This organization has elected to apply a 10% de minimis rate in accordance with 2 CFR 200.414(f).

You must provide an explanation (below or in a separate attachment) and show how your indirect cost rate was applied to this budget in order to come up with the indirect costs shown.

AEA is in the process of developing an indirect cost allocation plan (ICAP) and is working with independent contractor to develop a cost model to track and allocate indirect costs for federal cost recovery. AEA will seek approval of the ICAP by their cognizant agency as required. AEA understands that this process will take up to two years for development of the ICAP and the required approval. Currently, AEA utilized the 10% de minimis rate in accordance with 2 CFR 200.414(f). AEA fully expects to have an approved ICAP and indirect cost rate by July 1, 2025 and therefore, for budgetary purposes only, AEA has used an estimated rate of 25%. AEA will only request reimbursement based on the 10% de minimis rate or an approved indirect cost rate.

1. A detailed presentation of the cash or cash value of all cost share proposed must be provided in the table below. All items in the chart below must be identified within the applicable cost category tabs a. through i. in addition to the detailed presentation of the cash or cash value of all cost share proposed provided in the table below. Identify the source organization & amount of each cost share item proposed in the award.
2. Cash Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment, etc. for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project. **Contractors may not provide cost share.** Any partial donation of goods or services is considered a discount and is not allowable.
3. In Kind Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) where a value of the contribution can be readily determined, verified and justified but where no actual cash is transacted in securing the good or service comprising the contribution. In Kind cost share items include volunteer personnel hours, the donation of space or use of equipment, etc. The cash value and calculations thereof for all In Kind cost share items must be justified and explained in the Cost Share Item section below. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out In Kind cost share in this section. **Contractors may not provide cost share.** Any partial donation of goods or services is considered a discount and is not allowable.
4. Funds from other Federal sources MAY NOT be counted as cost share. This prohibition includes FFRDC sub-recipients. Non-Federal sources include any source not originally derived from Federal funds. Cost sharing commitment letters from subrecipients and third parties must be provided with the original application.
5. Fee or profit, including foregone fee or profit, **are not allowable** as project costs (including cost share) under any resulting award. The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.
6. **NOTE:** A Recipient who elects to employ the 10% de minimis Indirect Cost rate **cannot claim the resulting indirect costs as a Cost Share contribution.**
7. **NOTE:** A Recipient **cannot claim "unrecovered indirect costs"** as a Cost Share contribution, **without prior approval.**
8. Each budget period is rounded to the nearest dollar.

Total Project Cost: \$498,693,168	Cost Share Percent of Award:	50.0%
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Additional Explanation (as needed): Projects will provide match, this program will be developed and then projects selected. Therefore all the sources of match are not known at this time.

Applicant Name: Alaska Energy Authority Award Number: 0

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary							
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget			
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)		Total (g)
1. Budget Period 1				-\$5,284,762	\$37,190,906		\$31,906,144
2. Budget Period 2				\$259,527,589	\$141,265,622		\$400,793,211
3. Budget Period 3				-\$4,912,987	\$70,906,800		\$65,993,813
4. Budget Period 4				\$0	\$0		\$0
5. Budget Period 5				\$0	\$0		\$0
6. Totals				\$249,329,840	\$249,363,328		\$498,693,168
Section B - Budget Categories							
6. Object Class Categories		Grant Program, Function or Activity					Total (5)
		Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	
a. Personnel		\$3,718,800	\$7,879,767	\$4,164,927	\$0	\$0	\$15,763,494
b. Fringe Benefits		\$0	\$0	\$0	\$0	\$0	\$0
c. Travel		\$366,000	\$732,000	\$366,000	\$0	\$0	\$1,464,000
d. Equipment		\$100,000	\$0	\$0	\$0	\$0	\$100,000
e. Supplies		\$80,000	\$160,000	\$80,000	\$0	\$0	\$320,000
f. Contractual		\$26,711,619	\$390,051,533	\$60,342,699	\$0	\$0	\$477,105,851
g. Construction		\$0	\$0	\$0	\$0	\$0	\$0
h. Other		\$0	\$0	\$0	\$0	\$0	\$0
i. Total Direct Charges (sum of 6a-6h)		\$30,976,419	\$398,823,300	\$64,953,626	\$0	\$0	\$494,753,345
j. Indirect Charges		\$929,725	\$1,969,912	\$1,040,187	\$0	\$0	\$3,939,823
k. Totals (sum of 6i-6j)		\$31,906,144	\$400,793,211	\$65,993,813	\$0	\$0	\$498,693,168
7. Program Income							\$0

Rural Alaska Microgrid Transformation

Topic Areas 3: Grid Innovation Program

The Alaska Energy Authority (AEA) is the State's energy office and primary agency for state-wide energy policy and program development. AEA's mission is to reduce the cost of energy in Alaska. AEA manages a broad portfolio of supply and demand side energy projects and takes a whole-community approach in addressing energy cost reduction issues. In partnership with the Alaska Municipal League (AML), Alaska Native Tribal Health Consortium (ANTHC), and the Alaska Center for Energy and Power (ACEP), AEA proposes to truly transform up to twenty rural Alaskan community microgrids from diesel power generation to clean, renewable energy.

The goal of these transformed community microgrids is to replace the baseload diesel power production with renewable energy. Hydro, solar, and wind are the primary renewable power sources found to be successful in Alaska. In addition, many of the possible hydro projects would produce more power than could be used by typical community demand. This excess power would be used for community heat and would enable increased capacity for energy storage, which is a critical resource in rural Alaska. This use of excess electricity for heat reduction would displace heating oil, wood burning, diesel, and other types of fuel, thereby maximizing environmental benefits including carbon reduction.

This project rests on critical success factors that leverage AEA's experience with delivering projects in rural Alaska:

- (1) Feasibility of project technologies in rural Alaska communities
- (2) Process innovation, and the combination of technologies
- (3) Partner contributions, and appropriate levels of analysis
- (4) Cost of materials and services, and supply chain availability
- (5) Sustainability of operations, and planning for maintenance and operations

AEA's approach to stakeholder engagement will result in project locations that will be determined based on level of disadvantage and the feasibility of meeting the critical success factors. The project selection team will evaluate the availability of a skilled workforce and potential to offer skills training as part of a community benefits plan. This will lower costs and address any environmental justice factors that may exist, while ensuring community benefits. Projects will be selected via a request for application with scoring that takes into account disadvantaged communities' criteria, the ability to replace 100% of baseload diesel generation, reduce the cost of energy, create clean energy jobs, and mitigate health and safety risks.

Alaska is in a critical position to leverage available federal infrastructure funding to make a transformative impact on the energy systems of disadvantaged, rural communities. AEA is proposing a carefully managed process to identify, vet, and support the implementation of projects in rural communities. This effort will leverage AEA's technical expertise and program management, as well as experience working in rural Alaska, to engage partners, stakeholders, and project proponents in an efficient and effective system of project evaluation and deployment.

Prime Applicant: Alaska Energy Authority (AEA)

Project Title: Transforming Alaska's Rural Microgrids

Project Impact/Takeaway: The majority of Alaska's rural microgrids are powered by diesel generators, and this project will transform participating communities by facilitating the transition to locally sourced renewables

Project goals: Lowering the cost of energy in disadvantaged communities while reducing carbon emissions.

Technology: This project will utilize local wind, solar, and hydro matched with battery storage systems.

Impact: The combined use of these technologies will reduce rural community reliance on fossil fuels.

Total Project Costs	\$500,000,000
Federal Share	\$250,000,000
Match	\$250,000,000



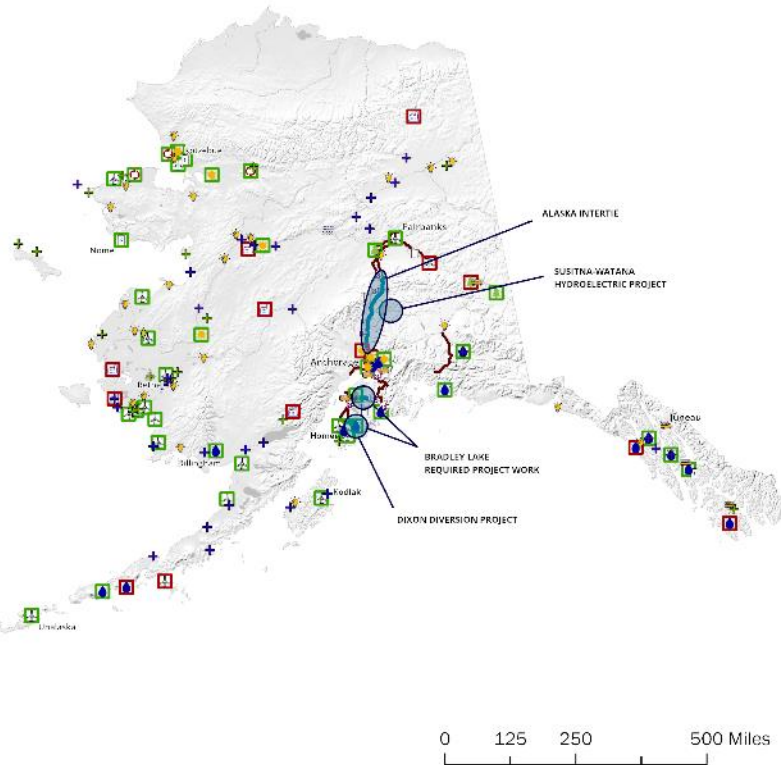
Alaska Energy Authority (AEA)

Transforming Alaska's Rural Microgrids

Alaska Renewable Opportunities



- + Rural Power System Upgrades (33)
- + Bulk Fuel Upgrades (25)
- + Village Energy Efficiency Program (27)
- + Volkswagen Diesel Settlement Grants (7)
- + Biogas (1)
- + Biomass (4)
- + Diesel (6)
- + Emerging Energy Technology Fund (1)
- + Electric Vehicles (9)
- + Heat Recovery (3)
- + Hydroelectric (18)
- + Hydrokinetic (1)
- + Solar (8)
- + Storage (3)
- + Transmission (3)
- + Wind (21)
- Transmission Line owned by AEA
- Other Transmission Line
- Power Project Fund (16)
- Renewable Energy Fund (44)



Renewable Energy Investment in Alaska by Energy Source, 2010-2020

Primary Energy Source	Investment (\$millions)	% of Total
Hydroelectric	\$330	48%
Wind	\$240	35%
Biomass	\$30	5%
Geothermal (Testing and Assessment)	\$30	4%
Solar	\$10	2%
Other Renewables	\$50	7%
Total	\$690	100%

Investment in Alaska Renewable Energy Projects, 2010-2020

\$690 million invested
260 Projects
160 Communities
448 million Pounds of CO2 Offset Annually
15-20 Construction Jobs per million Invested



Alaska Energy Authority (AEA)

Transforming Alaska's Rural Microgrids

Principal Investigator	• Rebecca Garrett
Key Personnel	• Audrey Alstrom • Conner Erickson • Karen Bell • Karin St. Clair
Key Partners	• Alaska Center for Energy and Power (ACEP), • Alaska Municipal League, (AML) • Alaska Native Tribal Health Consortium (ANTHC)
Proposed Project Duration	• 96 months

Project Team and Outcomes

Benefits	Quantifiable	Measure	Tracking
Decrease in Energy Burden	Tbtu / Million \$	Site Energy Savings	
Energy Costs Savings	2009 Baseline – annual and cumulative		
Decrease in environmental exposure	MMT	CO2 Reduction	2009 Baseline – annual and cumulative
Increase in access to low-cost capital	Million \$	Capital availability	AAHA report on access to capital
Increase in job creation and training	Job #s	Jobs and training opportunities	ASHBA report/DOL&WD
Increase in clean energy jobs and enterprise creation	Business #s	Business development	ASHBA report/AKSBDC
Increase in community ownership	Municipal code	Adoption or revision	Community reporting/AML
Increased parity in clean energy technology access and adoption	Municipal code	Energy technology reference	Community reporting/AML



Instructions and Summary

Award Number: _____
Award Recipient: Alaska Energy Authority

Date of Submission: 19-May-23
Form submitted by: Alaska Municipal League
(May be award recipient or sub-recipient)

Please read the instructions on each worksheet tab before starting. If you have any questions, please ask your DOE contact!

1. If using this form for award application, negotiation, or budget revision, fill out the blank white cells in workbook tabs a. through j. with total project costs. If using this form for invoice submission, fill out tabs a. through j. with total costs for just the proposed invoice and fill out tab k. per the instructions on that tab.
2. Blue colored cells contain instructions, headers, or summary calculations and should not be modified. Only blank white cells should be populated.
3. Enter detailed support for the project costs identified for each Category line item within each worksheet tab to autopopulate the summary tab.
4. The total budget presented on tabs a. through i. must include both Federal (DOE) and Non-Federal (cost share) portions.
5. All costs incurred by the preparer's sub-recipients, vendors, and Federal Research and Development Centers (FFRDCs), should be entered only in section f. Contractual. All other sections are for the costs of the preparer only.
6. Ensure all entered costs are allowable, allocable, and reasonable in accordance with the administrative requirements prescribed in 2 CFR 200, and the applicable cost principles for each entity type: FAR Part 31 for For-Profit entities; and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.
7. Add rows as needed throughout tabs a. through j. If rows are added, formulas/calculations may need to be adjusted by the preparer. Do not add rows to the Instructions and Summary tab. If your project contains more than five budget periods, consult your DOE contact before adding additional budget period rows or columns.
8. **ALL budget period cost categories are rounded to the nearest dollar.**

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2 - GTN, Paperwork Reduction Project (1910-5162), U.S. Department of Energy 1000 Independence Avenue, S.W., Washington, DC 20585; and to the Office of Management and Budget, Paperwork Reduction Project (1910-5162), Washington, DC 20503.

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

The values in this summary table are from entries made in subsequent tabs, only blank white cells require data entry

Section A - Budget Summary								
		Federal	Cost Share			Total Costs	Cost Share %	Proposed Budget Period Dates
Budget Period 1		\$128,049	\$0			\$128,049	0.00%	Example!!! 01/01/2014 - 12/31/2014
Budget Period 2		\$889,724	\$0			\$889,724	0.00%	
Budget Period 3		\$150,871	\$0			\$150,871	0.00%	
Budget Period 4		\$0	\$0			\$0	0.00%	
Budget Period 5		\$0	\$0			\$0	0.00%	
Total		\$1,168,644	\$0			\$1,168,644	0.00%	
Section B - Budget Categories								
CATEGORY	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Costs	% of Project	Comments (as needed)
a. Personnel	\$85,566	\$560,226	\$101,713	\$0	\$0	\$747,505	63.96%	
b. Fringe Benefits	\$28,117	\$184,094	\$33,422	\$0	\$0	\$245,633	21.02%	
c. Travel	\$2,725	\$64,520	\$2,020	\$0	\$0	\$69,265	5.93%	
d. Equipment	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
e. Supplies	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
f. Contractual								
Sub-recipient	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Vendor	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
FFRDC	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Total Contractual	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
g. Construction	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
h. Other Direct Costs	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Total Direct Costs	\$116,408	\$808,840	\$137,155	\$0	\$0	\$1,062,403	90.91%	
i. Indirect Charges	\$11,641	\$80,884	\$13,716	\$0	\$0	\$106,241	9.09%	
Total Costs	\$128,049	\$889,724	\$150,871	\$0	\$0	\$1,168,644	100.00%	

Additional Explanation (as needed):

1. List project costs solely for employees of the entity completing this form. All personnel costs for subrecipients and vendors must be included under f. Contractual.
2. All personnel should be identified by position title and not employee name. Enter the amount of time (e.g., hours or % of time) and the base pay rate and the total direct personnel compensation will automatically calculate. Rate basis (e.g., actual salary, labor distribution report, state civil service rates, etc.) must also be identified.
3. If loaded labor rates are utilized, a description of the costs the loaded rate is comprised of must be included in the Additional Explanation section below. DOE must review all components of the loaded labor rate for reasonableness and unallowable costs (e.g. fee or profit).
4. If a position and hours are attributed to multiple employees (e.g. Technician working 4000 hours) the number of employees for that position title must be identified.
5. Each budget period is rounded to the nearest dollar.

Additional Explanation (as needed): Salaries are based on one full time project coordinator, dedicated to project support and implementation, starting at our current coordinator mid-level salary positions, adjusted by 2.5% each year as a COLA. The project manager position is based on current salaries, and represents 5% of annual hours, with the same salary adjustment of 2.5%.

b. Fringe Benefits

INSTRUCTIONS - PLEASE READ!!!
1. Fill out the table below by position title. If all employees receive the same fringe benefits, you can show "Total Personnel" in the Labor Type column instead of listing out all position titles.
2. The rates and how they are applied should not be averaged to get one fringe cost percentage. Complex calculations should be described/provided in the Additional Explanation section below.
3. The fringe benefit rates should be applied to all positions, regardless of whether those funds will be supported by Federal Share or Recipient Cost Share.
4. Each budget period is rounded to the nearest dollar.

Labor Type	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Total Project
	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	
EXAMPLE!!! Sr. Engineer	\$170,000	20%	\$34,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$38,000
Project Coordinator	\$ 78,741.00	32.86%	\$25,874	\$ 515,551.19	32.86%	\$169,410	\$ 93,598.30	32.86%	\$30,756			\$0			\$0	\$226,041
Project Manager	\$ 6,825.00	32.86%	\$2,243	\$ 44,686.22	32.86%	\$14,684	\$ 8,112.78	32.86%	\$2,666			\$0			\$0	\$19,592
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
Total:	\$85,566		\$28,117	\$560,237		\$184,094	\$101,711		\$33,422	\$0		\$0	\$0		\$0	\$245,633

A federally approved fringe benefit rate agreement, or a proposed rate supported and agreed upon by DOE for estimating purposes is required at the time of award negotiation if reimbursement for fringe benefits is requested. Please check (X) one of the options below and provide the requested information if not previously submitted.

☐ A fringe benefit rate has been negotiated with, or approved by, a federal government agency. A copy of the latest rate agreement is/was included with the project application.*

☒ There is not a current federally approved rate agreement negotiated and available.**

*Unless the organization has submitted an indirect rate proposal which encompasses the fringe pool of costs, please provide the organization's benefit package and/or a list of the components/elements that comprise the fringe pool and the cost or percentage of each component/element allocated to the labor costs identified in the Budget Justification (Form EERE 335.1).

**When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided in the Sample Rate Proposal at <http://www1.eere.energy.gov/financing/resources.html>, or a format that provides the same level of information and which will support the rates being proposed for use in the performance of the proposed project.

Additional Explanation (as necessary): AML's fringe rate is based on actual average experience across all employees. It includes Social Security of 6.20%, Medicare of 1.45%, Unemployment of 1.00%, a health insurance and life insurance that is 19%, and deferred compensation retirement benefit of 5%. The total of these is 32.86%.

c. Travel

INSTRUCTIONS - PLEASE READ!!!

1. Identify Foreign and Domestic Travel as separate items. Examples of Purpose of Travel are subrecipient site visits, DOE meetings, project mgmt. meetings, etc. Examples of Basis for Estimating Costs are past trips, travel quotes, GSA rates, etc.

2. All listed travel must be necessary for performance of the Statement of Project Objectives.

3. Federal travel regulations are contained within the applicable cost principles for all entity types. Travel costs should remain consistent with travel costs incurred by an organization during normal business operations as a result of the organizations written travel policy. In absence of a written travel policy, organizations must follow the regulations prescribed by the General Services Administration.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Purpose of Travel	Depart From	Destination	No. of Days	No. of Travelers	Lodging per Traveler	Flight per Traveler	Vehicle per Traveler	Per Diem Per Traveler	Cost per Trip	Basis for Estimating Costs
	Domestic Travel	Budget Period 1									
1	EXAMPLE!!! Visit to PV manufacturer			2	2	\$250	\$500	\$100	\$160	\$2,020	Current GSA rates
	Planning meeting	Juneau	Anchorage	2	2	\$360	\$400		\$250	\$2,020	Most recent experience.
	Planning meeting	Juneau	Anchorage	1	1	\$180	\$400		\$125	\$705	Most recent experience.
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 1 Total									\$2,725	
	Domestic Travel	Budget Period 2									
	Rural site visits to each participating community	Anchorage	Rural Alaska	40	1	\$360	\$750		\$200	\$52,400	Most recent experience.
	Planning meetings	Juneau	Anchorage	6	2	\$360	\$400		\$250	\$12,120	Most recent experience.
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 2 Total									\$64,520	
	Domestic Travel	Budget Period 3									
	Evaluation meetings	Juneau	Anchorage	2	2	\$360	\$400		\$250	\$2,020	Most recent experience.
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 3 Total									\$2,020	
	Domestic Travel	Budget Period 4									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 4 Total									\$0	
	Domestic Travel	Budget Period 5									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 5 Total									\$0	
	PROJECT TOTAL									\$69,265	

Additional Explanation (as needed):

d. Equipment

INSTRUCTIONS - PLEASE READ!!!

1. Equipment is generally defined as an item with an acquisition cost greater than \$5,000 and a useful life expectancy of more than one year. Please refer to the applicable Federal regulations in 2 CFR 200 for specific equipment definitions and treatment.

2. List all equipment below, providing a basis of cost (e.g. vendor quotes, catalog prices, prior invoices, etc.). Briefly justify items as they apply to the Statement of Project Objectives. If it is existing equipment, provide logical support for the estimated value shown.

3. During award negotiations, provide a vendor quote for all equipment items over \$50,000 in price. If the vendor quote is not an exact price match, provide an explanation in the additional explanation section below. If a vendor quote is not practical, such as for a piece of equipment that is purpose-built, first of its kind, or otherwise not available off the shelf, provide a detailed engineering estimate for how the cost estimate was derived.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Equipment Item	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
3,4,5	EXAMPLE!!! Thermal shock chamber	2	\$70,000	\$140,000	Vendor Quote - Attached	Reliability testing of PV modules- Task 4.3
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 1 Total			\$0		
Budget Period 2						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 2 Total			\$0		
Budget Period 3						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 3 Total			\$0		
Budget Period 4						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 4 Total			\$0		
Budget Period 5						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 5 Total			\$0		
	PROJECT TOTAL			\$0		

Additional Explanation (as needed):

e. Supplies

INSTRUCTIONS - PLEASE READ!!!

1. Supplies are generally defined as an item with an acquisition cost of \$5,000 or less and a useful life expectancy of less than one year. Supplies are generally consumed during the project performance. Please refer to the applicable Federal regulations in 2 CFR 200 for specific supplies definitions and treatment.

2. List all proposed supplies below, providing a basis of costs (e.g. vendor quotes, catalog prices, prior invoices, etc.). Briefly justify the need for the Supplies as they apply to the Statement of Project Objectives. Note that Supply items must be direct costs to the project at this budget category, and not duplicative of supply costs included in the indirect pool that is the basis of the indirect rate applied for this project.

3. Multiple supply items valued at \$5,000 or less used to assemble an equipment item with a value greater than \$5,000 with a useful life of more than one year should be included on the equipment tab. If supply items and costs are ambiguous in nature, contact your DOE representative for proper categorization.

4. Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

5. Each budget period is rounded to the nearest dollar.

SOPOTask #	General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
4,6	EXAMPLE!!! Wireless DAS components	10	\$360.00	\$3,600	Catalog price	For Alpha prototype - Task 2.4
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 1 Total			\$0		
Budget Period 2						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 2 Total			\$0		
Budget Period 3						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 3 Total			\$0		
Budget Period 4						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 4 Total			\$0		
Budget Period 5						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 5 Total			\$0		
	PROJECT TOTAL			\$0		

Additional Explanation (as needed):

f. Contractual

INSTRUCTIONS - PLEASE READ!!!

1. The entity completing this form must provide all costs related to subrecipients, vendors, and FFRDC partners in the applicable boxes below.

2. Subrecipients (partners, sub-awardees): Subrecipients shall submit a Budget Justification describing all project costs and calculations when their total proposed budget exceeds either (1) \$100,000 or (2) 50% of total award costs. These subrecipient forms may be completed by either the subrecipients themselves or by the preparer of this form. The budget totals on the subrecipient's forms must match the subrecipient entries below. A subrecipient is a legal entity to which a subaward is made, who has performance measured against whether the objectives of the Federal program are met, is responsible for programmatic decision making, must adhere to applicable Federal program compliance requirements, and uses the Federal funds to carry out a program of the organization. All characteristics may not be present and judgment must be used to determine subrecipient vs. vendor status.

3. Vendors (including contractors): List all vendors and contractors supplying commercial supplies or services used to support the project. For each Vendor cost with total project costs of \$250,000 or more, a Vendor quote must be provided. A vendor is a legal entity contracted to provide goods and services within normal business operations, provides similar goods or services to many different purchasers, operates in a competitive environment, provides goods or services that are ancillary to the operation of the Federal program, and is not subject to compliance requirements of the Federal program. All characteristics may not be present and judgment must be used to determine subrecipient vs. vendor status.

4. Federal Funded Research and Development Centers (FFRDCs): FFRDCs must submit a signed Field Work Proposal during award application. The award recipient may allow the FFRDC to provide this information directly to DOE, however project costs must also be provided below.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Sub-Recipient Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
2,4	EXAMPLE!!! XYZ Corp.	Partner to develop optimal lens for Gen 2 product. Cost estimate based on personnel hours.	\$48,000	\$32,000	\$16,000			\$96,000
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

SOPO Task #	Vendor Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
6	EXAMPLE!!! ABC Corp.	Vendor for developing robotics to perform lens inspection. Estimate provided by vendor.	\$32,900	\$86,500				\$119,400
								\$0
								\$0
								\$0
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

SOPO Task #	FFRDC Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

	Total Contractual		\$0	\$0	\$0	\$0	\$0	\$0
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Additional Explanation (as needed):

g. Construction

PLEASE READ!!!

1. Construction, for the purpose of budgeting, is defined as all types of work done on a particular building, including erecting, altering, or remodeling. Construction conducted by the award recipient is entered on this page. Any construction work that is performed by a vendor or subrecipient should be entered under f. Contractual.

2. List all proposed construction below, providing a basis of cost such as engineering estimates, prior construction, etc., and briefly justify its need as it applies to the Statement of Project Objectives.

3. Each budget period is rounded to the nearest dollar.

Overall description of construction activities: Example Only!!! - Build wind turbine platform

SOPO Task #	General Description	Cost	Basis of Cost	Justification of need
Budget Period 1				
3	EXAMPLE ONLY!!! Three days of excavation for platform site	\$28,000	Engineering estimate	Site must be prepared for construction of platform.
	Budget Period 1 Total	\$0		
Budget Period 2				
	Budget Period 2 Total	\$0		
Budget Period 3				
	Budget Period 3 Total	\$0		
Budget Period 4				
	Budget Period 4 Total	\$0		
Budget Period 5				
	Budget Period 5 Total	\$0		
	PROJECT TOTAL	\$0		

Additional Explanation (as needed):

h. Other Direct Costs

INSTRUCTIONS - PLEASE READ!!!

1. Other direct costs are direct cost items required for the project which do not fit clearly into other categories. These direct costs must not be included in the indirect costs (for which the indirect rate is being applied for this project). Examples are: tuition, printing costs, etc. which can be directly charged to the project and are not duplicated in indirect costs (overhead costs).

2. Basis of cost are items such as vendor quotes, prior purchases of similar or like items, published price list, etc.

3. Each budget period is rounded to the nearest dollar.

SOPOTask #	General Description and SOPOTask #	Cost	Basis of Cost	Justification of need
Budget Period 1				
5	EXAMPLE!!! Grad student tuition - tasks 1-3	\$16,000	Established UCD costs	Support of graduate students working on project
	Budget Period 1 Total	\$0		
Budget Period 2				
	Budget Period 2 Total	\$0		
Budget Period 3				
	Budget Period 3 Total	\$0		
Budget Period 4				
	Budget Period 4 Total	\$0		
Budget Period 5				
	Budget Period 5 Total	\$0		
	PROJECT TOTAL	\$0		

Additional Explanation (as needed):

i. Indirect Costs

INSTRUCTIONS - PLEASE READ!!!

1.

Fill out the table below to indicate how your indirect costs are calculated. Use the box below to provide additional explanation regarding your indirect rate calculation.

2.

The rates and how they are applied should not be averaged to get one indirect cost percentage. Complex calculations or rates that do not do not correspond to the below categories should be described/provided in the Additional Explanation section below. If questions exist, consult with your DOE contact before filling out this section.

3.

The indirect rate should be applied to both the Federal Share and Recipient Cost Share.

4.

Each budget period is rounded to the nearest dollar.

	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total	Explanation of BASE
Provide ONLY Applicable Rates:							
Overhead Rate	0.00%	0.00%	0.00%				De minimis
General & Administrative (G&A)	0.00%	0.00%	0.00%				
FCCM Rate, if applicable	0.00%	0.00%	0.00%				
OTHER Indirect Rate	10.00%	10.00%	10.00%				
Indirect Costs (As Applicable):							
Overhead Costs						\$0	
G&A Costs						\$0	
FCCM Costs, if applicable						\$0	
OTHER Indirect Costs	\$11,641	\$80,884	\$13,716			\$106,241	
Total indirect costs requested:	\$11,641	\$80,884	\$13,716	\$0	\$0	\$106,241	

A federally approved indirect rate agreement, or rate proposed (supported and agreed upon by DOE for estimating purposes) is required if reimbursement of indirect costs is requested. Please check (X) one of the options below and provide the requested information if it has not already been provided as requested, or has changed.

An indirect rate has been approved or negotiated with a federal government agency. A copy of the latest rate agreement is included with this application, and will be provided electronically to the Contracting Officer for this project.

x

There is not a current, federally approved rate agreement negotiated and available*.

*When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided by your DOE contact, or a format that provides the same level of information and which will support the rates being proposed for use in performance of the proposed project. Additionally, any non-Federal entity that has never received a negotiated indirect cost rate, except for those non-Federal entities described in Appendix VII to Part 200—States and Local Government and Indian Tribe Indirect Cost Proposals, paragraph D.1.b, may elect to charge a de minimis rate of 10% of modified total direct costs (MTDC) which may be used indefinitely.As described in §200.403 Factors affecting allowability of costs, costs must be consistently charged as either indirect or direct costs, but may not be double charged or inconsistently charged as both. If chosen, this methodology once elected must be used consistently for all Federal awards until such time as a non-Federal entity chooses to negotiate for a rate, which the non-Federal entity may apply to do at any time.

You must provide an explanation (below or in a separate attachment) and show how your indirect cost rate was applied to this budget in order to come up with the indirect costs shown.

Additional Explanation (as needed): AML is a non-Federal entity that has never received a negotiated indirect cost rate, and is not a State, Local Government, or Indian Tribe. AML elects to charge a de minimiis rate of 10% of modified total direct costs.

Cost Share

PLEASE READ!!!

1. A detailed presentation of the cash or cash value of all cost share proposed must be provided in the table below. All items in the chart below must be identified within the applicable cost category tabs a. through i. in addition to the detailed presentation of the cash or cash value of all cost share proposed provided in the table below. Identify the source organization & amount of each cost share item proposed in the award.

2. Cash Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment, etc. for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project. Any partial donation of goods or services is considered a discount and is not allowable.

3. In Kind Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) where a value of the contribution can be readily determined, verified and justified but where no actual cash is transacted in securing the good or service comprising the contribution. In Kind cost share items include volunteer personnel hours, the donation of space or use of equipment, etc. The cash value and calculations thereof for all In Kind cost share items must be justified and explained in the Cost Share Item section below. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out In Kind cost share in this section. Vendors may not provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

4. Funds from other Federal sources MAY NOT be counted as cost share. This prohibition includes FFRDC sub-recipients. Non-Federal sources include any source not originally derived from Federal funds. Cost sharing commitment letters from subrecipients and third parties must be provided with the original application.

5. Fee or profit, including foregone fee or profit, **are not allowable** as project costs (including cost share) under any resulting award. The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

6. **NOTE:** A Recipient who elects to employ the 10% de minimis Indirect Cost rate **cannot claim the resulting indirect costs as a Cost Share contribution.**

7. **NOTE:** A Recipient **cannot claim "unrecovered indirect costs"** as a Cost Share contribution, **without prior approval.**

8. Each budget period is rounded to the nearest dollar.

Organization/Source	Type (Cash or In Kind)	Cost Share Item	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Project Cost Share
ABC Company EXAMPLE!!!	Cash	Project partner ABC Company will provide 20 PV modules for product development at the price of \$680 per module	\$13,600					\$13,600
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
		Totals	\$0	\$0	\$0	\$0	\$0	\$0

Total Project Cost: \$1,168,644

Cost Share Percent of Award:0.0%

Additional Explanation (as needed):

Applicant Name: Alaska Energy Authority Award Number: 0

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary							
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget			
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)		Total (g)
1. Budget Period 1				\$128,049	\$0		\$128,049
2. Budget Period 2				\$889,724	\$0		\$889,724
3. Budget Period 3				\$150,871	\$0		\$150,871
4. Budget Period 4				\$0	\$0		\$0
5. Budget Period 5				\$0	\$0		\$0
6. Totals				\$1,168,644	\$0		\$1,168,644
Section B - Budget Categories							
6. Object Class Categories		Grant Program, Function or Activity					Total (5)
		Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	
a. Personnel		\$85,566	\$560,226	\$101,713	\$0	\$0	\$747,505
b. Fringe Benefits		\$28,117	\$184,094	\$33,422	\$0	\$0	\$245,633
c. Travel		\$2,725	\$64,520	\$2,020	\$0	\$0	\$69,265
d. Equipment		\$0	\$0	\$0	\$0	\$0	\$0
e. Supplies		\$0	\$0	\$0	\$0	\$0	\$0
f. Contractual		\$0	\$0	\$0	\$0	\$0	\$0
g. Construction		\$0	\$0	\$0	\$0	\$0	\$0
h. Other		\$0	\$0	\$0	\$0	\$0	\$0
i. Total Direct Charges (sum of 6a-6h)		\$116,408	\$808,840	\$137,155	\$0	\$0	\$1,062,403
j. Indirect Charges		\$11,641	\$80,884	\$13,716	\$0	\$0	\$106,241
k. Totals (sum of 6i-6j)		\$128,049	\$889,724	\$150,871	\$0	\$0	\$1,168,644
7. Program Income							\$0

Instructions and Summary

Award Number: _____
Award Recipient: Alaska Energy Authority

Date of Submission: 19-May-23
Form submitted by: ANTHC

(May be award recipient or sub-recipient)

Please read the instructions on each worksheet tab before starting. If you have any questions, please ask your DOE contact!

1. If using this form for award application, negotiation, or budget revision, fill out the blank white cells in workbook tabs a. through j. with total project costs. If using this form for invoice submission, fill out tabs a. through j. with total costs for just the proposed invoice and fill out tab k. per the instructions on that tab.
2. Blue colored cells contain instructions, headers, or summary calculations and should not be modified. Only blank white cells should be populated.
3. Enter detailed support for the project costs identified for each Category line item within each worksheet tab to autopopulate the summary tab.
4. The total budget presented on tabs a. through i. must include both Federal (DOE) and Non-Federal (cost share) portions.
5. All costs incurred by the preparer's sub-recipients, vendors, and Federal Research and Development Centers (FFRDCs), should be entered only in section f. Contractual. All other sections are for the costs of the preparer only.
6. Ensure all entered costs are allowable, allocable, and reasonable in accordance with the administrative requirements prescribed in 2 CFR 200, and the applicable cost principles for each entity type: FAR Part 31 for For-Profit entities; and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.
7. Add rows as needed throughout tabs a. through j. If rows are added, formulas/calculations may need to be adjusted by the preparer. Do not add rows to the Instructions and Summary tab. If your project contains more than five budget periods, consult your DOE contact before adding additional budget period rows or columns.
8. ALL budget period cost categories are rounded to the nearest dollar.

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2 - GTN, Paperwork Reduction Project (1910-5162), U.S. Department of Energy 1000 Independence Avenue, S.W., Washington, DC 20585; and to the Office of Management and Budget, Paperwork Reduction Project (1910-5162), Washington, DC 20503.

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

The values in this summary table are from entries made in subsequent tabs, only blank white cells require data entry

Section A - Budget Summary								
		Federal	Cost Share			Total Costs	Cost Share %	Proposed Budget Period Dates
Budget Period 1		\$350,144	\$0			\$350,144	0.00%	01/01/2024 - 05/30/2025
Budget Period 2		\$914,332	\$0			\$914,332	0.00%	06/01/2025 - 05/30/230
Budget Period 3		\$63,906	\$0			\$63,906	0.00%	01/01/2030 - 12/31/2031
Budget Period 4		\$0	\$0			\$0	0.00%	
Budget Period 5		\$0	\$0			\$0	0.00%	
Total		\$1,328,382	\$0			\$1,328,382	0.00%	
Section B - Budget Categories								
CATEGORY	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Costs	% of Project	Comments (as needed)
a. Personnel	\$215,791	\$555,810	\$43,085	\$0	\$0	\$814,686	61.33%	
b. Fringe Benefits	\$49,811	\$126,837	\$10,565	\$0	\$0	\$187,213	14.09%	
c. Travel	\$36,180	\$108,540	\$0	\$0	\$0	\$144,720	10.89%	
d. Equipment	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
e. Supplies	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
f. Contractual								
Sub-recipient	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Vendor	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
FFRDC	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Total Contractual	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
g. Construction	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
h. Other Direct Costs	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Total Direct Costs	\$301,783	\$791,187	\$53,649	\$0	\$0	\$1,146,619	86.32%	
i. Indirect Charges	\$48,361	\$123,145	\$10,257	\$0	\$0	\$181,763	13.68%	
Total Costs	\$350,144	\$914,332	\$63,906	\$0	\$0	\$1,328,382	100.00%	

Additional Explanation (as needed):

a. Personnel

INSTRUCTIONS - PLEASE READ!!!

1. List project costs solely for employees of the entity completing this form. All personnel costs for subrecipients and vendors must be included under f. Contractual.

2. All personnel should be identified by position title and not employee name. Enter the amount of time (e.g., hours or % of time) and the base pay rate and the total direct personnel compensation will automatically calculate. Rate basis (e.g., actual salary, labor distribution report, state civil service rates, etc.) must also be identified.

3. If loaded labor rates are utilized, a description of the costs the loaded rate is comprised of must be included in the Additional Explanation section below. DOE must review all components of the loaded labor rate for reasonableness and unallowable costs (e.g. fee or profit).

4. If a position and hours are attributed to multiple employees (e.g. Technician working 4000 hours) the number of employees for that position title must be identified.

5. Each budget period is rounded to the nearest dollar.

[illegible]

Additional Explanation (as needed):

b. Fringe Benefits

INSTRUCTIONS - PLEASE READ!!!
1. Fill out the table below by position title. If all employees receive the same fringe benefits, you can show "Total Personnel" in the Labor Type column instead of listing out all position titles.
2. The rates and how they are applied should not be averaged to get one fringe cost percentage. Complex calculations should be described/provided in the Additional Explanation section below.
3. The fringe benefit rates should be applied to all positions, regardless of whether those funds will be supported by Federal Share or Recipient Cost Share.
4. Each budget period is rounded to the nearest dollar.

Labor Type	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Total Project
	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	
Total Personnel (pool excluded)	138,365	36.00%	\$49,811	352,325	36.00%	\$126,837	29,346	36.00%	\$10,565			\$0			\$0	\$187,213
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
Total:	\$138,365		\$49,811	\$352,325		\$126,837	\$29,346		\$10,565	\$0		\$0	\$0		\$0	\$187,213

A federally approved fringe benefit rate agreement, or a proposed rate supported and agreed upon by DOE for estimating purposes is required at the time of award negotiation if reimbursement for fringe benefits is requested. Please check (X) one of the options below and provide the requested information if not previously submitted.

☒ X

A fringe benefit rate has been negotiated with, or approved by, a federal government agency. A copy of the latest rate agreement is/was included with the project application.*

There is not a current federally approved rate agreement negotiated and available.**

*Unless the organization has submitted an indirect rate proposal which encompasses the fringe pool of costs, please provide the organization's benefit package and/or a list of the components/elements that comprise the fringe pool and the cost or percentage of each component/element allocated to the labor costs identified in the Budget Justification (Form EERE 335.1).

**When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided in the Sample Rate Proposal at <http://www1.eere.energy.gov/financing/resources.html>, or a format that provides the same level of information and which will support the rates being proposed for use in the performance of the proposed project.

Additional Explanation (as necessary): Please use this box (or an attachment) to list the elements that comprise your fringe benefits and how they are applied to your base (e.g. Personnel) to arrive at your fringe benefit rate.

c. Travel

INSTRUCTIONS - PLEASE READ!!!

1. Identify Foreign and Domestic Travel as separate items. Examples of Purpose of Travel are subrecipient site visits, DOE meetings, project mgmt. meetings, etc. Examples of Basis for Estimating Costs are past trips, travel quotes, GSA rates, etc.

2. All listed travel must be necessary for performance of the Statement of Project Objectives.

3. Federal travel regulations are contained within the applicable cost principles for all entity types. Travel costs should remain consistent with travel costs incurred by an organization during normal business operations as a result of the organizations written travel policy. In absence of a written travel policy, organizations must follow the regulations prescribed by the General Services Administration.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Purpose of Travel	Depart From	Destination	No. of Days	No. of Travelers	Lodging per Traveler	Flight per Traveler	Vehicle per Traveler	Per Diem Per Traveler	Cost per Trip	Basis for Estimating Costs
	Domestic Travel	Budget Period 1									
2 and 3	Technical assistance site visits: cost per community	Anchorage, AK	Various remote communities	3	2	\$386	\$1,000	\$60	\$363	\$3,618	Current GSA rates for lodging and per diem; flight estimate based on Alaska Airlines to hub community, local carrier from hub to village. \$20/day allowance for taxis/shuttles/etc.
2 and 3	10 technical assistance site visits to communities in first budget period	Anchorage, AK	Various remote communities							\$36,180	Row 8 multiplied by 10 site visits
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 1 Total									\$36,180	
	Domestic Travel	Budget Period 2									
2 and 3	Technical assistance site visits: cost per community	Anchorage, AK	Various remote communities	3	2	\$386	\$1,000	\$60	\$363	\$3,618	Current GSA rates for lodging and per diem; flight estimate based on Alaska Airlines to hub community, local carrier from hub to village. \$20/day allowance for taxis/shuttles/etc.
2 and 3	30 technical assistance site visits to communities in second budget period	Anchorage, AK	Various remote communities							\$108,540	Row 16 multiplied by 30 site visits
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 2 Total									\$108,540	
	Domestic Travel	Budget Period 3									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 3 Total									\$0	
	Domestic Travel	Budget Period 4									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 4 Total									\$0	
	Domestic Travel	Budget Period 5									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 5 Total									\$0	
	PROJECT TOTAL									\$144,720	

Additional Explanation (as needed):

d. Equipment

INSTRUCTIONS - PLEASE READ!!!

1. Equipment is generally defined as an item with an acquisition cost greater than \$5,000 and a useful life expectancy of more than one year. Please refer to the applicable Federal regulations in 2 CFR 200 for specific equipment definitions and treatment.

2. List all equipment below, providing a basis of cost (e.g. vendor quotes, catalog prices, prior invoices, etc.). Briefly justify items as they apply to the Statement of Project Objectives. If it is existing equipment, provide logical support for the estimated value shown.

3. During award negotiations, provide a vendor quote for all equipment items over \$50,000 in price. If the vendor quote is not an exact price match, provide an explanation in the additional explanation section below. If a vendor quote is not practical, such as for a piece of equipment that is purpose-built, first of its kind, or otherwise not available off the shelf, provide a detailed engineering estimate for how the cost estimate was derived.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Equipment Item	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 1 Total			\$0		
Budget Period 2						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 2 Total			\$0		
Budget Period 3						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 3 Total			\$0		
Budget Period 4						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 4 Total			\$0		
Budget Period 5						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 5 Total			\$0		
	PROJECT TOTAL			\$0		

Additional Explanation (as needed):

e. Supplies

INSTRUCTIONS - PLEASE READ!!!

1. Supplies are generally defined as an item with an acquisition cost of \$5,000 or less and a useful life expectancy of less than one year. Supplies are generally consumed during the project performance. Please refer to the applicable Federal regulations in 2 CFR 200 for specific supplies definitions and treatment.

2. List all proposed supplies below, providing a basis of costs (e.g. vendor quotes, catalog prices, prior invoices, etc.). Briefly justify the need for the Supplies as they apply to the Statement of Project Objectives. Note that Supply items must be direct costs to the project at this budget category, and not duplicative of supply costs included in the indirect pool that is the basis of the indirect rate applied for this project.

3. Multiple supply items valued at \$5,000 or less used to assemble an equipment item with a value greater than \$5,000 with a useful life of more than one year should be included on the equipment tab. If supply items and costs are ambiguous in nature, contact your DOE representative for proper categorization.

4. Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 1 Total			\$0		
Budget Period 2						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 2 Total			\$0		
Budget Period 3						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 3 Total			\$0		
Budget Period 4						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 4 Total			\$0		
Budget Period 5						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 5 Total			\$0		
	PROJECT TOTAL			\$0		

Additional Explanation (as needed):

f. Contractual

INSTRUCTIONS - PLEASE READ!!!

1. The entity completing this form must provide all costs related to subrecipients, vendors, and FFRDC partners in the applicable boxes below.

2. Subrecipients (partners, sub-awardees): Subrecipients shall submit a Budget Justification describing all project costs and calculations when their total proposed budget exceeds either (1) \$100,000 or (2) 50% of total award costs. These subrecipient forms may be completed by either the subrecipients themselves or by the preparer of this form. The budget totals on the subrecipient's forms must match the subrecipient entries below. A subrecipient is a legal entity to which a subaward is made, who has performance measured against whether the objectives of the Federal program are met, is responsible for programmatic decision making, must adhere to applicable Federal program compliance requirements, and uses the Federal funds to carry out a program of the organization. All characteristics may not be present and judgment must be used to determine subrecipient vs. vendor status.

3. Vendors (including contractors): List all vendors and contractors supplying commercial supplies or services used to support the project. For each Vendor cost with total project costs of \$250,000 or more, a Vendor quote must be provided. A vendor is a legal entity contracted to provide goods and services within normal business operations, provides similar goods or services to many different purchasers, operates in a competitive environment, provides goods or services that are ancillary to the operation of the Federal program, and is not subject to compliance requirements of the Federal program. All characteristics may not be present and judgment must be used to determine subrecipient vs. vendor status.

4. Federal Funded Research and Development Centers (FFRDCs): FFRDCs must submit a signed Field Work Proposal during award application. The award recipient may allow the FFRDC to provide this information directly to DOE, however project costs must also be provided below.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Sub-Recipient Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

SOPO Task #	Vendor Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
								\$0
								\$0
								\$0
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

SOPO Task #	FFRDC Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

	Total Contractual		\$0	\$0	\$0	\$0	\$0	\$0
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Additional Explanation (as needed):

g. Construction

PLEASE READ!!!

1. Construction, for the purpose of budgeting, is defined as all types of work done on a particular building, including erecting, altering, or remodeling. Construction conducted by the award recipient is entered on this page. Any construction work that is performed by a vendor or subrecipient should be entered under f. Contractual.

2. List all proposed construction below, providing a basis of cost such as engineering estimates, prior construction, etc., and briefly justify its need as it applies to the Statement of Project Objectives.

3. Each budget period is rounded to the nearest dollar.

Overall description of construction activities: Example Only!!! - Build wind turbine platform

SOPO Task #	General Description	Cost	Basis of Cost	Justification of need
Budget Period 1				
	Budget Period 1 Total	\$0		
Budget Period 2				
	Budget Period 2 Total	\$0		
Budget Period 3				
	Budget Period 3 Total	\$0		
Budget Period 4				
	Budget Period 4 Total	\$0		
Budget Period 5				
	Budget Period 5 Total	\$0		
	PROJECT TOTAL	\$0		

Additional Explanation (as needed):

h. Other Direct Costs

INSTRUCTIONS - PLEASE READ!!!

1. Other direct costs are direct cost items required for the project which do not fit clearly into other categories. These direct costs must not be included in the indirect costs (for which the indirect rate is being applied for this project). Examples are: tuition, printing costs, etc. which can be directly charged to the project and are not duplicated in indirect costs (overhead costs).

2. Basis of cost are items such as vendor quotes, prior purchases of similar or like items, published price list, etc.

3. Each budget period is rounded to the nearest dollar.

SOPO Task #	General Description and SOPO Task #	Cost	Basis of Cost	Justification of need
Budget Period 1				
	Budget Period 1 Total	\$0		
Budget Period 2				
	Budget Period 2 Total	\$0		
Budget Period 3				
	Budget Period 3 Total	\$0		
Budget Period 4				
	Budget Period 4 Total	\$0		
Budget Period 5				
	Budget Period 5 Total	\$0		
	PROJECT TOTAL	\$0		

Additional Explanation (as needed):

i. Indirect Costs

INSTRUCTIONS - PLEASE READ!!!
1. Fill out the table below to indicate how your indirect costs are calculated. Use the box below to provide additional explanation regarding your indirect rate calculation.
2. The rates and how they are applied should not be averaged to get one indirect cost percentage. Complex calculations or rates that do not do not correspond to the below categories should be described/provided in the Additional Explanation section below. If questions exist, consult with your DOE contact before filling out this section.
3. The indirect rate should be applied to both the Federal Share and Recipient Cost Share.
4. Each budget period is rounded to the nearest dollar.

	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total	Explanation of BASE
Provide ONLY Applicable Rates:							
Overhead Rate	25.70%	25.70%	25.70%	0.00%	0.00%		
General & Administrative (G&A)	0.00%	0.00%	0.00%	0.00%	0.00%		
FCCM Rate, if applicable	0.00%	0.00%	0.00%	0.00%	0.00%		
OTHER Indirect Rate	0.00%	0.00%	0.00%	0.00%	0.00%		
Indirect Costs (As Applicable):							
Overhead Costs	\$48,361	\$123,145	\$10,257			\$181,763	Rate applied to personnel and fringe per ANTHC's federally negotiated rate with HHS (excluding pool)
G&A Costs						\$0	
FCCM Costs, if applicable						\$0	
OTHER Indirect Costs						\$0	
Total indirect costs requested:	\$48,361	\$123,145	\$10,257	\$0	\$0	\$181,763	

A federally approved indirect rate agreement, or rate proposed (supported and agreed upon by DOE for estimating purposes) is required if reimbursement of indirect costs is requested. Please check (X) one of the options below and provide the requested information if it has not already been provided as requested, or has changed.

☒ An indirect rate has been approved or negotiated with a federal government agency. A copy of the latest rate agreement is included with this application, and will be provided electronically to the Contracting Officer for this project.

☐ There is not a current, federally approved rate agreement negotiated and available*.

*When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided by your DOE contact, or a format that provides the same level of information and which will support the rates being proposed for use in performance of the proposed project. Additionally, any non-Federal entity that has never received a negotiated indirect cost rate, except for those non-Federal entities described in Appendix VII to Part 200—States and Local Government and Indian Tribe Indirect Cost Proposals, paragraph D.1.b, may elect to charge a de minimis rate of 10% of modified total direct costs (MTDC) which may be used indefinitely.As described in §200.403 Factors affecting allowability of costs, costs must be consistently charged as either indirect or direct costs, but may not be double charged or inconsistently charged as both. If chosen, this methodology once elected must be used consistently for all Federal awards until such time as a non-Federal entity chooses to negotiate for a rate, which the non-Federal entity may apply to do at any time.

You must provide an explanation (below or in a separate attachment) and show how your indirect cost rate was applied to this budget in order to come up with the indirect costs shown.

Additional Explanation (as needed): *IMPORTANT: Please use this box (or an attachment) to further explain how your total indirect costs were calculated. If the total indirect costs are a cumulative amount of more than one calculation or rate application, the explanation and calculations should identify all rates used, along with the base they were applied to (and how the base was derived), and a total for each (along with grand total).

Cost Share

PLEASE READ!!!

1. A detailed presentation of the cash or cash value of all cost share proposed must be provided in the table below. All items in the chart below must be identified within the applicable cost category tabs a. through i. in addition to the detailed presentation of the cash or cash value of all cost share proposed provided in the table below. Identify the source organization & amount of each cost share item proposed in the award.

2. Cash Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment, etc. for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project. Any partial donation of goods or services is considered a discount and is not allowable.

3. In Kind Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) where a value of the contribution can be readily determined, verified and justified but where no actual cash is transacted in securing the good or service comprising the contribution. In Kind cost share items include volunteer personnel hours, the donation of space or use of equipment, etc. The cash value and calculations thereof for all In Kind cost share items must be justified and explained in the Cost Share Item section below. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out In Kind cost share in this section. Vendors may not provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

4. Funds from other Federal sources MAY NOT be counted as cost share. This prohibition includes FFRDC sub-recipients. Non-Federal sources include any source not originally derived from Federal funds. Cost sharing commitment letters from subrecipients and third parties must be provided with the original application.

5. Fee or profit, including foregone fee or profit, **are not allowable** as project costs (including cost share) under any resulting award. The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

6. NOTE: A Recipient who elects to employ the 10% de minimis Indirect Cost rate **cannot claim the resulting indirect costs as a Cost Share contribution.**

7. NOTE: A Recipient **cannot claim "unrecovered indirect costs"** as a Cost Share contribution, **without prior approval.**

8. Each budget period is rounded to the nearest dollar.

Organization/Source	Type (Cash or In Kind)	Cost Share Item	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Project Cost Share
ABC Company EXAMPLE!!!	Cash	Project partner ABC Company will provide 20 PV modules for product development at the price of \$680 per module	\$13,600					\$13,600
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
		Totals	\$0	\$0	\$0	\$0	\$0	\$0

Total Project Cost: \$1,328,382

Cost Share Percent of Award:0.0%

Additional Explanation (as needed):

Applicant Name: Alaska Energy Authority Award Number: 0

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary							
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget			
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)		Total (g)
1. Budget Period 1				\$350,144	\$0		\$350,144
2. Budget Period 2				\$914,332	\$0		\$914,332
3. Budget Period 3				\$63,906	\$0		\$63,906
4. Budget Period 4				\$0	\$0		\$0
5. Budget Period 5				\$0	\$0		\$0
6. Totals				\$1,328,382	\$0		\$1,328,382
Section B - Budget Categories							
6. Object Class Categories		Grant Program, Function or Activity					Total (5)
		Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	
a. Personnel		\$215,791	\$555,810	\$43,085	\$0	\$0	\$814,686
b. Fringe Benefits		\$49,811	\$126,837	\$10,565	\$0	\$0	\$187,213
c. Travel		\$36,180	\$108,540	\$0	\$0	\$0	\$144,720
d. Equipment		\$0	\$0	\$0	\$0	\$0	\$0
e. Supplies		\$0	\$0	\$0	\$0	\$0	\$0
f. Contractual		\$0	\$0	\$0	\$0	\$0	\$0
g. Construction		\$0	\$0	\$0	\$0	\$0	\$0
h. Other		\$0	\$0	\$0	\$0	\$0	\$0
i. Total Direct Charges (sum of 6a-6h)		\$301,783	\$791,187	\$53,649	\$0	\$0	\$1,146,619
j. Indirect Charges		\$48,361	\$123,145	\$10,257	\$0	\$0	\$181,763
k. Totals (sum of 6i-6j)		\$350,144	\$914,332	\$63,906	\$0	\$0	\$1,328,382
7. Program Income							\$0

Instructions and Summary

Award Number: _____
Award Recipient: Alaska Energy Authority

Date of Submission: 19-May-23
Form submitted by: Alaska Center for Energy and Power
(May be award recipient or sub-recipient)

Please read the instructions on each worksheet tab before starting. If you have any questions, please ask your DOE contact!

1. If using this form for award application, negotiation, or budget revision, fill out the blank white cells in workbook tabs a. through j. with total project costs. If using this form for invoice submission, fill out tabs a. through j. with total costs for just the proposed invoice and fill out tab k. per the instructions on that tab.
2. Blue colored cells contain instructions, headers, or summary calculations and should not be modified. Only blank white cells should be populated.
3. Enter detailed support for the project costs identified for each Category line item within each worksheet tab to autopopulate the summary tab.
4. The total budget presented on tabs a. through i. must include both Federal (DOE) and Non-Federal (cost share) portions.
5. All costs incurred by the preparer's sub-recipients, vendors, and Federal Research and Development Centers (FFRDCs), should be entered only in section f. Contractual. All other sections are for the costs of the preparer only.
6. Ensure all entered costs are allowable, allocable, and reasonable in accordance with the administrative requirements prescribed in 2 CFR 200, and the applicable cost principles for each entity type: FAR Part 31 for For-Profit entities; and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.
7. Add rows as needed throughout tabs a. through j. If rows are added, formulas/calculations may need to be adjusted by the preparer. Do not add rows to the Instructions and Summary tab. If your project contains more than five budget periods, consult your DOE contact before adding additional budget period rows or columns.
8. **ALL budget period cost categories are rounded to the nearest dollar.**

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2 - GTN, Paperwork Reduction Project (1910-5162), U.S. Department of Energy 1000 Independence Avenue, S.W., Washington, DC 20585; and to the Office of Management and Budget, Paperwork Reduction Project (1910-5162), Washington, DC 20503.

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

The values in this summary table are from entries made in subsequent tabs, only blank white cells require data entry

Section A - Budget Summary								
		Federal	Cost Share			Total Costs	Cost Share %	Proposed Budget Period Dates
	Budget Period 1	\$138,930	\$0			\$138,930	0.00%	01/01/2024 - 05/30/2025
	Budget Period 2	\$927,528	\$0			\$927,528	0.00%	06/01/2025 - 5/30/2030
	Budget Period 3	\$163,806	\$0			\$163,806	0.00%	01/01/2030 - 12/31/2031
	Budget Period 4	\$0	\$0			\$0	0.00%	
	Budget Period 5	\$0	\$0			\$0	0.00%	
	Total	\$1,230,265	\$0			\$1,230,265	0.00%	
Section B - Budget Categories								
CATEGORY	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Costs	% of Project	Comments (as needed)
a. Personnel	\$91,621	\$566,433	\$108,911	\$0	\$0	\$766,966	62.34%	
b. Fringe Benefits	\$32,943	\$215,691	\$39,159	\$0	\$0	\$287,793	23.39%	
c. Travel	\$2,725	\$64,520	\$2,020	\$0	\$0	\$69,265	5.63%	
d. Equipment	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
e. Supplies	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
f. Contractual								
Sub-recipient	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Vendor	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
FFRDC	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Total Contractual	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
g. Construction	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
h. Other Direct Costs	\$0	\$0	\$0	\$0	\$0	\$0	0.00%	
Total Direct Costs	\$127,289	\$846,644	\$150,090	\$0	\$0	\$1,124,024	91.36%	
i. Indirect Charges	\$11,641	\$80,884	\$13,716	\$0	\$0	\$106,241	8.64%	
Total Costs	\$138,930	\$927,528	\$163,806	\$0	\$0	\$1,230,265	100.00%	

Additional Explanation (as needed):

a. Personnel

INSTRUCTIONS - PLEASE READ!!!

1. List project costs solely for employees of the entity completing this form. All personnel costs for subrecipients and vendors must be included under f. Contractual.
2. All personnel should be identified by position title and not employee name. Enter the amount of time (e.g., hours or % of time) and the base pay rate and the total direct personnel compensation will automatically calculate. Rate basis (e.g., actual salary, labor distribution report, state civil service rates, etc.) must also be identified.
3. If loaded labor rates are utilized, a description of the costs the loaded rate is comprised of must be included in the Additional Explanation section below. DOE must review all components of the loaded labor rate for reasonableness and unallowable costs (e.g. fee or profit).
4. If a position and hours are attributed to multiple employees (e.g. Technician working 4000 hours) the number of employees for that position title must be identified.
5. Each budget period is rounded to the nearest dollar.

[illegible]

Additional Explanation (as needed): Salaries are based on one full time research engineer, dedicated to project support and implementation, starting at current mid-level salary, adjusted by 2.5% each year as a COLA. The senior research engineer is based on current salaries, and represents 5% of annual hours, with the same salary adjustment of 2.5%.

b. Fringe Benefits

INSTRUCTIONS - PLEASE READ!!!

1. Fill out the table below by position title. If all employees receive the same fringe benefits, you can show "Total Personnel" in the Labor Type column instead of listing out all position titles.

2. The rates and how they are applied should not be averaged to get one fringe cost percentage. Complex calculations should be described/provided in the Additional Explanation section below.

3. The fringe benefit rates should be applied to all positions, regardless of whether those funds will be supported by Federal Share or Recipient Cost Share.

4. Each budget period is rounded to the nearest dollar.

Labor Type	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Total Project
	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	
EXAMPLE!!! Sr. Engineer	\$170,000	20%	\$34,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$10,000	20%	\$2,000	\$38,000
Research Engineer	\$ 78,741.00	38.50%	\$30,315	\$ 515,551.19	38.50%	\$198,487	\$ 93,598.30	38.50%	\$36,035			\$0			\$0	\$264,838
Senior Research Engineer	\$ 6,825.00	38.50%	\$2,628	\$ 44,686.22	38.50%	\$17,204	\$ 8,112.78	38.50%	\$3,123			\$0			\$0	\$22,955
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
			\$0			\$0			\$0			\$0			\$0	\$0
Total:	\$85,566		\$32,943	\$560,237		\$215,691	\$101,711		\$39,159	\$0		\$0	\$0		\$0	\$287,793

A federally approved fringe benefit rate agreement, or a proposed rate supported and agreed upon by DOE for estimating purposes is required at the time of award negotiation if reimbursement for fringe benefits is requested. Please check (X) one of the options below and provide the requested information if not previously submitted.

☐

A fringe benefit rate has been negotiated with, or approved by, a federal government agency. A copy of the latest rate agreement is/was included with the project application.*

☒

There is not a current federally approved rate agreement negotiated and available.**

*Unless the organization has submitted an indirect rate proposal which encompasses the fringe pool of costs, please provide the organization's benefit package and/or a list of the components/elements that comprise the fringe pool and the cost or percentage of each component/element allocated to the labor costs identified in the Budget Justification (Form EERE 335.1).

**When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided in the Sample Rate Proposal at <http://www1.eere.energy.gov/financing/resources.html>, or a format that provides the same level of information and which will support the rates being proposed for use in the performance of the proposed project.

Additional Explanation (as necessary): UAF's fringe benefit rate of 14.3% is calculated on total salary and wages and includes the employer contribution towards health insurance (medical and dental), disability and group life insurance, and paid time off (PTO).

c. Travel

INSTRUCTIONS - PLEASE READ!!!

1. Identify Foreign and Domestic Travel as separate items. Examples of Purpose of Travel are subrecipient site visits, DOE meetings, project mgmt. meetings, etc. Examples of Basis for Estimating Costs are past trips, travel quotes, GSA rates, etc.

2. All listed travel must be necessary for performance of the Statement of Project Objectives.

3. Federal travel regulations are contained within the applicable cost principles for all entity types. Travel costs should remain consistent with travel costs incurred by an organization during normal business operations as a result of the organizations written travel policy. In absence of a written travel policy, organizations must follow the regulations prescribed by the General Services Administration.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Purpose of Travel	Depart From	Destination	No. of Days	No. of Travelers	Lodging per Traveler	Flight per Traveler	Vehicle per Traveler	Per Diem Per Traveler	Cost per Trip	Basis for Estimating Costs
	Domestic Travel	Budget Period 1									
1	EXAMPLE!!! Visit to PV manufacturer			2	2	\$250	\$500	\$100	\$160	\$2,020	Current GSA rates
	Planning meeting	Fairbanks	Anchorage	2	2	\$360	\$400		\$250	\$2,020	Most recent experience.
	Planning meeting	Fairbanks	Anchorage	1	1	\$180	\$400		\$125	\$705	Most recent experience.
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 1 Total									\$2,725	
	Domestic Travel	Budget Period 2									
	Rural site visits to each participating community	Anchorage	Rural Alaska	40	1	\$360	\$750		\$200	\$52,400	Most recent experience.
	Planning meetings	Fairbanks	Anchorage	6	2	\$360	\$400		\$250	\$12,120	Most recent experience.
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 2 Total									\$64,520	
	Domestic Travel	Budget Period 3									
	Evaluation meetings	Fairbanks	Anchorage	2	2	\$360	\$400		\$250	\$2,020	Most recent experience.
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 3 Total									\$2,020	
	Domestic Travel	Budget Period 4									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 4 Total									\$0	
	Domestic Travel	Budget Period 5									
										\$0	
										\$0	
										\$0	
										\$0	
	International Travel										
										\$0	
	Budget Period 5 Total									\$0	
	PROJECT TOTAL									\$69,265	

Additional Explanation (as needed):

d. Equipment

INSTRUCTIONS - PLEASE READ!!!

1. Equipment is generally defined as an item with an acquisition cost greater than \$5,000 and a useful life expectancy of more than one year. Please refer to the applicable Federal regulations in 2 CFR 200 for specific equipment definitions and treatment.

2. List all equipment below, providing a basis of cost (e.g. vendor quotes, catalog prices, prior invoices, etc.). Briefly justify items as they apply to the Statement of Project Objectives. If it is existing equipment, provide logical support for the estimated value shown.

3. During award negotiations, provide a vendor quote for all equipment items over \$50,000 in price. If the vendor quote is not an exact price match, provide an explanation in the additional explanation section below. If a vendor quote is not practical, such as for a piece of equipment that is purpose-built, first of its kind, or otherwise not available off the shelf, provide a detailed engineering estimate for how the cost estimate was derived.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Equipment Item	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
3,4,5	EXAMPLE!!! Thermal shock chamber	2	\$70,000	\$140,000	Vendor Quote - Attached	Reliability testing of PV modules- Task 4.3
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 1 Total			\$0		
Budget Period 2						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 2 Total			\$0		
Budget Period 3						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 3 Total			\$0		
Budget Period 4						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 4 Total			\$0		
Budget Period 5						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 5 Total			\$0		
	PROJECT TOTAL			\$0		

Additional Explanation (as needed):

e. Supplies

INSTRUCTIONS - PLEASE READ!!!

1. Supplies are generally defined as an item with an acquisition cost of \$5,000 or less and a useful life expectancy of less than one year. Supplies are generally consumed during the project performance. Please refer to the applicable Federal regulations in 2 CFR 200 for specific supplies definitions and treatment.

2. List all proposed supplies below, providing a basis of costs (e.g. vendor quotes, catalog prices, prior invoices, etc.). Briefly justify the need for the Supplies as they apply to the Statement of Project Objectives. Note that Supply items must be direct costs to the project at this budget category, and not duplicative of supply costs included in the indirect pool that is the basis of the indirect rate applied for this project.

3. Multiple supply items valued at \$5,000 or less used to assemble an equipment item with a value greater than \$5,000 with a useful life of more than one year should be included on the equipment tab. If supply items and costs are ambiguous in nature, contact your DOE representative for proper categorization.

4. Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

5. Each budget period is rounded to the nearest dollar.

SOPOTask #	General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
4,6	EXAMPLE!!! Wireless DAS components	10	\$360.00	\$3,600	Catalog price	For Alpha prototype - Task 2.4
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 1 Total			\$0		
Budget Period 2						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 2 Total			\$0		
Budget Period 3						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 3 Total			\$0		
Budget Period 4						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 4 Total			\$0		
Budget Period 5						
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
				\$0		
	Budget Period 5 Total			\$0		
	PROJECT TOTAL			\$0		

Additional Explanation (as needed):

f. Contractual

INSTRUCTIONS - PLEASE READ!!!

1. The entity completing this form must provide all costs related to subrecipients, vendors, and FFRDC partners in the applicable boxes below.

2. Subrecipients (partners, sub-awardees): Subrecipients shall submit a Budget Justification describing all project costs and calculations when their total proposed budget exceeds either (1) \$100,000 or (2) 50% of total award costs. These subrecipient forms may be completed by either the subrecipients themselves or by the preparer of this form. The budget totals on the subrecipient's forms must match the subrecipient entries below. A subrecipient is a legal entity to which a subaward is made, who has performance measured against whether the objectives of the Federal program are met, is responsible for programmatic decision making, must adhere to applicable Federal program compliance requirements, and uses the Federal funds to carry out a program of the organization. All characteristics may not be present and judgment must be used to determine subrecipient vs. vendor status.

3. Vendors (including contractors): List all vendors and contractors supplying commercial supplies or services used to support the project. For each Vendor cost with total project costs of \$250,000 or more, a Vendor quote must be provided. A vendor is a legal entity contracted to provide goods and services within normal business operations, provides similar goods or services to many different purchasers, operates in a competitive environment, provides goods or services that are ancillary to the operation of the Federal program, and is not subject to compliance requirements of the Federal program. All characteristics may not be present and judgment must be used to determine subrecipient vs. vendor status.

4. Federal Funded Research and Development Centers (FFRDCs): FFRDCs must submit a signed Field Work Proposal during award application. The award recipient may allow the FFRDC to provide this information directly to DOE, however project costs must also be provided below.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Sub-Recipient Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
2,4	EXAMPLE!!! XYZ Corp.	Partner to develop optimal lens for Gen 2 product. Cost estimate based on personnel hours.	\$48,000	\$32,000	\$16,000			\$96,000
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

SOPO Task #	Vendor Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
6	EXAMPLE!!! ABC Corp.	Vendor for developing robotics to perform lens inspection. Estimate provided by vendor.	\$32,900	\$86,500				\$119,400
								\$0
								\$0
								\$0
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

SOPO Task #	FFRDC Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
								\$0
								\$0
		Sub-total	\$0	\$0	\$0	\$0	\$0	\$0

	Total Contractual		\$0	\$0	\$0	\$0	\$0	\$0
--	-------------------	--	-----	-----	-----	-----	-----	-----

Additional Explanation (as needed):

g. Construction

PLEASE READ!!!

1. Construction, for the purpose of budgeting, is defined as all types of work done on a particular building, including erecting, altering, or remodeling. Construction conducted by the award recipient is entered on this page. Any construction work that is performed by a vendor or subrecipient should be entered under f. Contractual.

2. List all proposed construction below, providing a basis of cost such as engineering estimates, prior construction, etc., and briefly justify its need as it applies to the Statement of Project Objectives.

3. Each budget period is rounded to the nearest dollar.

Overall description of construction activities: Example Only!!! - Build wind turbine platform

SOPO Task #	General Description	Cost	Basis of Cost	Justification of need
Budget Period 1				
3	EXAMPLE ONLY!!! Three days of excavation for platform site	\$28,000	Engineering estimate	Site must be prepared for construction of platform.
	Budget Period 1 Total	\$0		
Budget Period 2				
	Budget Period 2 Total	\$0		
Budget Period 3				
	Budget Period 3 Total	\$0		
Budget Period 4				
	Budget Period 4 Total	\$0		
Budget Period 5				
	Budget Period 5 Total	\$0		
	PROJECT TOTAL	\$0		

Additional Explanation (as needed):

h. Other Direct Costs

INSTRUCTIONS - PLEASE READ!!!

1. Other direct costs are direct cost items required for the project which do not fit clearly into other categories. These direct costs must not be included in the indirect costs (for which the indirect rate is being applied for this project). Examples are: tuition, printing costs, etc. which can be directly charged to the project and are not duplicated in indirect costs (overhead costs).

2. Basis of cost are items such as vendor quotes, prior purchases of similar or like items, published price list, etc.

3. Each budget period is rounded to the nearest dollar.

SOPOTask #	General Description and SOPOTask #	Cost	Basis of Cost	Justification of need
Budget Period 1				
5	EXAMPLE!!! Grad student tuition - tasks 1-3	\$16,000	Established UCD costs	Support of graduate students working on project
	Budget Period 1 Total	\$0		
Budget Period 2				
	Budget Period 2 Total	\$0		
Budget Period 3				
	Budget Period 3 Total	\$0		
Budget Period 4				
	Budget Period 4 Total	\$0		
Budget Period 5				
	Budget Period 5 Total	\$0		
	PROJECT TOTAL	\$0		

Additional Explanation (as needed):

i. Indirect Costs

INSTRUCTIONS - PLEASE READ!!!

1.

Fill out the table below to indicate how your indirect costs are calculated. Use the box below to provide additional explanation regarding your indirect rate calculation.

2.

The rates and how they are applied should not be averaged to get one indirect cost percentage. Complex calculations or rates that do not do not correspond to the below categories should be described/provided in the Additional Explanation section below. If questions exist, consult with your DOE contact before filling out this section.

3.

The indirect rate should be applied to both the Federal Share and Recipient Cost Share.

4.

Each budget period is rounded to the nearest dollar.

	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total	Explanation of BASE
Provide ONLY Applicable Rates:							
Overhead Rate	0.00%	0.00%	0.00%				
General & Administrative (G&A)	55.00%	55.00%	55.00%				Modified Total Direct Costs
FCCM Rate, if applicable	0.00%	0.00%	0.00%				
OTHER Indirect Rate	10.00%	10.00%	10.00%				
Indirect Costs (As Applicable):							
Overhead Costs						\$0	
G&A Costs						\$0	
FCCM Costs, if applicable						\$0	
OTHER Indirect Costs	\$11,641	\$80,884	\$13,716			\$106,241	
Total indirect costs requested:	\$11,641	\$80,884	\$13,716	\$0	\$0	\$106,241	

A federally approved indirect rate agreement, or rate proposed (supported and agreed upon by DOE for estimating purposes) is required if reimbursement of indirect costs is requested. Please check (X) one of the options below and provide the requested information if it has not already been provided as requested, or has changed.

☒

X

An indirect rate has been approved or negotiated with a federal government agency. A copy of the latest rate agreement is included with this application, and will be provided electronically to the Contracting Officer for this project.

☐

There is not a current, federally approved rate agreement negotiated and available*.

*When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided by your DOE contact, or a format that provides the same level of information and which will support the rates being proposed for use in performance of the proposed project. Additionally, any non-Federal entity that has never received a negotiated indirect cost rate, except for those non-Federal entities described in Appendix VII to Part 200—States and Local Government and Indian Tribe Indirect Cost Proposals, paragraph D.1.b, may elect to charge a de minimis rate of 10% of modified total direct costs (MTDC) which may be used indefinitely.As described in §200.403 Factors affecting allowability of costs, costs must be consistently charged as either indirect or direct costs, but may not be double charged or inconsistently charged as both. If chosen, this methodology once elected must be used consistently for all Federal awards until such time as a non-Federal entity chooses to negotiate for a rate, which the non-Federal entity may apply to do at any time.

You must provide an explanation (below or in a separate attachment) and show how your indirect cost rate was applied to this budget in order to come up with the indirect costs shown.

Additional Explanation (as needed): Facilities and administrative (F&A) costs are negotiated with the Office of Naval Research. The FY23-FY26 predetermined rate for sponsored research at UAF is calculated at 55% of Modified Total Direct Costs (MTDC). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. A copy of the rate agreement is available at: <http://www.alaska.edu/cost-analysis/negotiation-agreements/>.

Cost Share

PLEASE READ!!!

1. A detailed presentation of the cash or cash value of all cost share proposed must be provided in the table below. All items in the chart below must be identified within the applicable cost category tabs a. through i. in addition to the detailed presentation of the cash or cash value of all cost share proposed provided in the table below. Identify the source organization & amount of each cost share item proposed in the award.

2. Cash Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment, etc. for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project. Any partial donation of goods or services is considered a discount and is not allowable.

3. In Kind Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) where a value of the contribution can be readily determined, verified and justified but where no actual cash is transacted in securing the good or service comprising the contribution. In Kind cost share items include volunteer personnel hours, the donation of space or use of equipment, etc. The cash value and calculations thereof for all In Kind cost share items must be justified and explained in the Cost Share Item section below. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out In Kind cost share in this section. Vendors may not provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

4. Funds from other Federal sources MAY NOT be counted as cost share. This prohibition includes FFRDC sub-recipients. Non-Federal sources include any source not originally derived from Federal funds. Cost sharing commitment letters from subrecipients and third parties must be provided with the original application.

5. Fee or profit, including foregone fee or profit, **are not allowable** as project costs (including cost share) under any resulting award. The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

6. **NOTE:** A Recipient who elects to employ the 10% de minimis Indirect Cost rate **cannot claim the resulting indirect costs as a Cost Share contribution.**

7. **NOTE:** A Recipient **cannot claim "unrecovered indirect costs"** as a Cost Share contribution, **without prior approval.**

8. Each budget period is rounded to the nearest dollar.

Organization/Source	Type (Cash or In Kind)	Cost Share Item	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Project Cost Share
ABC Company EXAMPLE!!!	Cash	Project partner ABC Company will provide 20 PV modules for product development at the price of \$680 per module	\$13,600					\$13,600
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
								\$0
		Totals	\$0	\$0	\$0	\$0	\$0	\$0

Total Project Cost: \$1,230,265

Cost Share Percent of Award:0.0%

Additional Explanation (as needed):

Applicant Name: Alaska Energy Authority Award Number: 0

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary							
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget			
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)		Total (g)
1. Budget Period 1				\$138,930	\$0		\$138,930
2. Budget Period 2				\$927,528	\$0		\$927,528
3. Budget Period 3				\$163,806	\$0		\$163,806
4. Budget Period 4				\$0	\$0		\$0
5. Budget Period 5				\$0	\$0		\$0
6. Totals				\$1,230,265	\$0		\$1,230,264
Section B - Budget Categories							
6. Object Class Categories		Grant Program, Function or Activity					Total (5)
		Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	
a. Personnel		\$91,621	\$566,433	\$108,911	\$0	\$0	\$766,966
b. Fringe Benefits		\$32,943	\$215,691	\$39,159	\$0	\$0	\$287,793
c. Travel		\$2,725	\$64,520	\$2,020	\$0	\$0	\$69,265
d. Equipment		\$0	\$0	\$0	\$0	\$0	\$0
e. Supplies		\$0	\$0	\$0	\$0	\$0	\$0
f. Contractual		\$0	\$0	\$0	\$0	\$0	\$0
g. Construction		\$0	\$0	\$0	\$0	\$0	\$0
h. Other		\$0	\$0	\$0	\$0	\$0	\$0
i. Total Direct Charges (sum of 6a-6h)		\$127,289	\$846,644	\$150,090	\$0	\$0	\$1,124,024
j. Indirect Charges		\$11,641	\$80,884	\$13,716	\$0	\$0	\$106,241
k. Totals (sum of 6i-6j)		\$138,930	\$927,528	\$163,806	\$0	\$0	\$1,230,265
7. Program Income							\$0

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

I. INSTRUCTIONS

The proposer shall prepare this Environmental Questionnaire (EQ) as accurately and completely as possible. Supporting information can be provided as attachments. The proposer must identify the location of the project and specifically describe the activities that would occur at that location. The proposer must provide specific information and quantities, regarding air emissions, wastewater discharges, solid wastes, etc., to facilitate the necessary review. In addition, the proposer must submit with this EQ a FINAL copy of the project's statement of work (SOW) or statement of project objective (SOPO) that will be used in the contract/agreement between the proposer and the U.S Department of Energy (DOE).

II. QUESTIONNAIRE

A. PROJECT SUMMARY

- Solicitation/Project Number: DE-FOA-0002740 Proposer: Alaska Energy Authority
- This Environmental Questionnaire pertains to a: ☒ Recipient or Prime Contractor ☐ Sub-recipient or Subcontractor
- Principal Investigator: Curtis Thayer Telephone Number: 907-771-3000
- Project Title: Rural Alaska Microgrid Transformation
- Expected Project Duration: 96 months
- Location of Activities covered by this Environmental Questionnaire: (City/Township, County, State):
Alaska at large
- List the full scope of activities planned (only for the location that is the subject of this Environmental Questionnaire).
Plan and develop a request for applications that will result in projects located in rural Alaska that will transform the local microgrid to renewable energy sources. As projects are identified through AEA's program implementation, project selection will include completion of this Environmental Assessment for each project, prior to award.
- List all other locations where work would be performed by the primary contractor of the project and subcontractor(s). Each of the following must have an individual Environmental Questionnaire.

Subcontractor or sub-recipient	Location of activities for this project
Alaska Municipal League	Juneau, Alaska
Alaska Center for Energy and Power	Fairbanks, Alaska
Alaska Native Tribal Health Consortium	Anchorage, Alaska

- Identify and select the checkbox with the predominant project work activities under Group A, B, or C

Group A

- ☒ Routine administrative, procurement, training, and personnel actions. Contract activities/awards for management support, financial assistance, and technical services in support of agency business, programs, projects, and goals. Literature searches and information gathering, material inventories, property surveys; data analysis, computer modeling, analytical reviews, technical summary, conceptual design, feasibility studies, document preparation, data dissemination, and paper studies. Technical assistance including financial planning, assistance, classroom training, public meetings, management training, survey participation, academic contribution, technical consultation, and stakeholders surveys. Workshop and conference planning, preparation, and implementation which may involve promoting energy efficiency, renewable energy, and energy conservation.

STOP! If all work activities related to this project can be classified and described within categories under Group A, proceed directly to Section III CERTIFICATION BY PROPOSER. No additional information is required.
If project work activities are described in either Group(s) B or C; then continue filling out questionnaire.

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ENVIRONMENTAL QUESTIONNAIRE

Group B

- ☐ Laboratory Scale Research, Bench Scale Research, Pilot Scale Research, Proof-of-Concept Scale Research, or Field Test Research. Work DOES NOT involve new building/facilities construction and site excavation/groundbreaking activities. This work typically involves routine operation of existing laboratories, commercial buildings/properties, offices and homes, project test facilities, factories/power plants, vehicles test stands and components, refueling facilities, utility systems, or other existing structures/facilities. Work will NOT involve major change in facilities missions and operations, land use planning, new/modified regulatory/operating permit requirements. Includes work specific to routine DOE Site operations and Lab research work activities, but NOT building construction and site preparation. DOE work typically involves laboratory facilities and lab equipment operations, buildings and grounds management activities; and buildings and facilities maintenance, repairs, reconfiguration, remodeling, equipment use and replacement.

Group C

- ☐ Pilot Test Facilities Construction, Pilot Scale Research, Field Scale Demonstration, or Commercial Scale Application. Work typically involves facility construction, site preparation/excavation/groundbreaking, and/or demolition. This work would include construction, retrofit, replacement, and/or major modifications of laboratories, test facilities, energy system prototypes, and power generation infrastructure. Work may also involve construction and maintenance of utilities system right-of-ways, roads, vehicle test facilities, commercial buildings/properties, fuel refinery/mixing facilities, refueling facility, power plants, underground wells, and pipelines, and other types of energy research related facilities. This work may require new or modified regulatory permits, environmental sampling and monitoring requirements, master planning, public involvement, and environmental impact review. Includes work specific to DOE Site Operations and Lab operation activities involving building and facilities construction, replacement, decommissioning/demolition, site preparation, land use changes, or change in research facilities mission or operations.

B. PROPOSED PROJECT ALTERNATIVES

1. If applicable, list any project alternatives considered to achieve the project objectives.

C. PROJECT LOCATION

1. Provide a brief description of the project location (physical location, surrounding area, adjacent structures).

2. Attach a project site location map of the project work area.

D. ENVIRONMENTAL IMPACTS

NEPA procedures require evaluations of possible effects (including land use, energy resource use, natural, historic and cultural resources, and pollutants) from proposed projects on the environment.

1. Land Use

- a. Characterize present land use where the proposed project would be located.

- | | | | |
|-----------------------------------|--|--------------------------------------|--|
| ☐ Urban | ☐ Industrial | ☐ Commercial | ☐ Agricultural |
| ☐ Suburban | ☐ Rural | ☐ Residential | ☐ Research Facilities |
| ☐ Forest | ☐ University Campus | ☐ Other: | |

- b. Identify the total size of the facility, structure, or system and what portion would be used for the proposed project.

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ENVIRONMENTAL QUESTIONNAIRE

- c. Describe planned construction, installation, and/or demolition activities, i.e., roads, utilities system right-of-ways, parking lots, buildings, laboratories, storage tanks, fueling facilities, underground wells, pipelines, or other structures.

☐ No construction would be anticipated for this project.

- d. Describe how land use would be affected by operational activities associated with the proposed project.

☐ No land areas would be affected.

- e. Describe any plans to reclaim areas that would be affected by the proposed project.

☐ No land areas would be affected.

- f. Would the proposed project affect any unique or unusual landforms (e.g., cliffs, waterfalls, etc.)?

☐ No ☐ Yes (describe)

- g. Would the proposed project be located in or near local, state, or federal parks; forests; monuments; scenic waterways; wilderness; recreation facilities; or tribal lands? ☐ No ☐ Yes (describe)

2. Construction Activities and/or Operation

- a. Identify project structure(s), power line(s), pipeline(s), utilities system(s), right-of-way(s) or road(s) that will be constructed and clearly mark them on a project site map or topographic map as appropriate. ☐ None

- b. Would the proposed project require the construction of waste pits or settling ponds?

☐ No ☐ Yes (describe and identify location, and estimate surface area disturbed)

- c. Would the proposed project affect any existing body of water? ☐ No ☐ Yes (describe)

- d. Would the proposed project impact a floodplain or wetland? ☐ No ☐ Yes (describe)

- e. Would the proposed project potentially cause runoff/sedimentation/erosion? ☐ No ☐ Yes (describe)

- f. Would the proposed project include activities located on perma-frost, near fault zones, or involve fracturing, well drilling, geologic stimulation, sequestration, active seismic data collection, and/or deepwater operations?

☐ No ☐ Yes (describe)

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ENVIRONMENTAL QUESTIONNAIRE

- g. Would the proposed project involve any of the following: nanotechnology; recombinant DNA or genetic engineering; facility decommissioning or disposition of equipment/materials; or management of radioactive wastes/materials?
- ☐ No ☐ Yes (describe)

3. Biological Resources

- a. Identify any State or Federally listed endangered or threatened plant or animal species potentially affected by the proposed project.
- ☐ None

- b. Would any designated critical habitat be affected by the proposed project? ☐ No ☐ Yes (describe)

- c. Describe any impacts that construction would have on any other types of sensitive or unique habitats.
- ☐ No planned construction ☐ No habitats ☐ None ☐ Impact (describe)

- d. Would any foreign substances/materials be introduced into ground or surface waters, soil, or other earth/geologic resource because of project activities? How would these foreign substances/materials affect the water, soil, biota, and geologic resources? ☐ No ☐ Yes (describe)

- e. Would any migratory animal corridors be impacted or disrupted by the proposed project? ☐ No ☐ Yes (describe)

4. Socioeconomic and Infrastructure Conditions

- a. Would local socio-economic changes result from the proposed project? ☐ No ☐ Yes (describe)

- b. Would the proposed project generate increased traffic use of roads through local neighborhoods, urban or rural areas?
- ☐ No ☐ Yes (describe)

- c. Would the proposed project require new transportation access (roads, rail, etc.)? Describe location, impacts, costs.
- ☐ No ☐ Yes (describe)

- d. Would the proposed project create a significant increase in local energy usage? ☐ No ☐ Yes (describe)

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ENVIRONMENTAL QUESTIONNAIRE

5. Historical/Cultural Resources

- a. Describe any historical, archaeological, or cultural sites in the vicinity of the proposed project; note any sites included on the National Register of Historic Places. ☐ None

- b. Would construction or operational activities planned under the proposed project disturb any historical, archaeological, or cultural sites? ☐ No planned construction ☐ No historic sites ☐ Yes (describe) ☐ No Impact (discuss)

- c. Has the State Historic Preservation Office been contacted with regard to this project? ☐ No ☐ Yes (describe)

- d. Would the proposed project interfere with visual resources (e.g., eliminate scenic views) or alter the present landscape? ☐ No ☐ Yes (describe)

- e. Would the proposed project be located on or adjacent to tribal lands, lands considered to be sacred, or lands used for traditional purposes? Describe any known tribal sensitivities for the proposed project area.

6. Atmospheric Conditions/Air Quality

- a. Identify air quality conditions in the immediate vicinity of the proposed project with regard to attainment of National Ambient Air Quality Standards (NAAQS). This information is available under the Green Book Non-Attainment Areas for Criteria Pollutants located at <http://www.epa.gov/air/oaqps/greenbk/astate.html>

	Attainment	Non-Attainment
O ₃ - 1 Hour	☐	☐
O ₃ - 8 Hour	☐	☐
SO _x	☐	☐
PM - 2.5	☐	☐
PM - 10	☐	☐
CO	☐	☐
NO ₂	☐	☐
Lead	☐	☐

- b. Would proposed project require issuance of new or modified local, state, or federal air permits to perform project related work and activities? ☐ No ☐ Yes (describe)

- c. Would the proposed project be in compliance with local and state air quality requirements? ☐ Yes
If not, please explain.

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ENVIRONMENTAL QUESTIONNAIRE

- d. Would the proposed project be classified as either a New Source or a major modification to an existing source?
☐ No ☐ Yes (describe)

- e. What types of air emissions, including fugitive emissions, would be anticipated from the proposed project, and what would be the maximum annual rate of emissions for the project?

	Maximum per Year	Total for Project
☐ SO _x		
☐ NO _x		
☐ PM - 2.5		
☐ PM - 10		
☐ CO		
☐ CO ₂		
☐ Lead		
☐ H ₂ S		
☐ Organic solvent vapors or other volatile organic compounds--List:		
☐ Hazardous air pollutants -- List:		
☐ Other -- List:		
☐ None		

- f. Would any types of emission control or particulate collection devices be used?
☐ No ☐ Yes (describe, including collection efficiencies)

- g. How would emissions be vented?

7. Hydrologic Conditions/Water Quality

- a. What nearby water bodies may be affected by the proposed project? Provide distance(s) from the project site.

- b. What sources would supply potable and process water for the proposed project?

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ENVIRONMENTAL QUESTIONNAIRE

- c. Quantify the wastewater that would be generated by the proposed project.

	Gallons/day	Gallons/year
☐ Non-contact cooling water		
☐ Process water		
☐ Sanitary		
☐ Other -- describe:		
☐ None		

- d. What would be the major components of each type of wastewater (e.g., coal fines)? ☐ No wastewater produced

- e. Identify the local treatment facility that would receive wastewater from the proposed project.

☐ No discharges to local treatment facility

- f. Describe how wastewater would be collected and treated. ☐ No wastewater produced

- g. Would any run-off or leachates be produced from storage piles or waste disposal sites? ☐ No ☐ Yes (describe source)

- h. Would project require issuance of new or modified water permits to perform project work or site development activities?
☐ No ☐ Yes (describe)

- i. Where would wastewater effluents from the proposed project be discharged? ☐ No wastewater produced

- j. Would the proposed project be permitted to discharge effluents into an existing body of water?
☐ No ☐ Yes (describe water use and effluent impact)

- k. Would a new or modified National Pollutant Discharge Elimination System (NPDES) permit be required?
☐ No ☐ Yes (describe)

- l. Would the proposed project adversely affect the quality or movement of groundwater? ☐ No ☐ Yes (describe)

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- m. Would the proposed project require issuance of an [Underground Injection Control \(UIC\)](#) permit?

☐ No ☐ Yes (describe)

- n. Would the proposed project be located in or near a wellhead protection area, drinking water protection area, or above a sole source aquifer or underground source of drinking water (USDW)?

☐ No ☐ Yes (describe)

8. Solid and Hazardous Wastes

- a. Identify and estimate wastes that would be generated from the project. Solid wastes are defined as any solid, liquid, semi-solid, or contained gaseous material that is discarded, has served its intended purpose, or is a manufacturing or mining by-product (See [EPA Municipal Solid Waste](#) and [Municipal Solid Waste by State](#)).

	Annual Quantity
☐ Municipal solid waste (e.g., paper, plastic, etc.)	
☐ Coal or coal by-products	
☐ Other -- Identify:	
☐ Hazardous waste -- Identify:	
☐ None	

- b. Would project require issuance of new or modified solid waste and/or hazardous waste related permits to perform project work activities? ☐ No ☐ Yes (explain)

- c. How and where would solid waste disposal be accomplished?

☐ None generated
☐ On-site (identify and describe location)
☐ Off-site (identify location and describe facility and treatment)

- d. How would wastes for disposal be transported?

- e. Describe hazardous wastes that would be generated, treated, handled, or stored under this project. Hazardous waste information can be found at [EPA Hazardous Waste](#) website. ☐ None

- f. How would hazardous or toxic waste be collected and stored? ☐ None used or produced

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ENVIRONMENTAL QUESTIONNAIRE

- g. If hazardous wastes would require off-site disposal, have arrangements been made with a certified TSD (Treatment, Storage, and Disposal) facility?
- ☐ Not required ☐ Arrangements not yet made ☐ Arrangements made with a certified TSD facility (identify)

9. Health/Safety Factors

- a. Identify hazardous or toxic materials that would be used in the proposed project.
- ☐ None ☐ Hazardous or toxic materials that would be used (identify):
- b. Describe the potential impacts of this project's hazardous materials on human health and the environment.
- ☐ None
- c. Would there be any special physical hazards or health risks associated with the project? ☐ No ☐ Yes (describe)
- d. Does a worker safety program exist at the location of the proposed project? ☐ No ☐ Yes (describe)
- e. Would additional safety training be necessary for any new laboratory, equipment, or processes involved with the project?
- ☐ No ☐ Yes (describe)
- f. Describe any increases in ambient noise levels to the public from construction and operational activities.
- ☐ None ☐ Increase in ambient noise level (describe)
- g. Would project construction result in the removal of natural or other barriers that act as noise screens?
- ☐ No construction planned ☐ No ☐ Yes (describe)
- h. Would hearing protection be required for workers? ☐ No ☐ Yes (describe)
- ### 10. Environmental Restoration and/or Waste Management
- a. Would the proposed project include CERCLA removals or similar actions under RCRA or other authorities?
- ☐ No ☐ Yes (describe)

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ENVIRONMENTAL QUESTIONNAIRE

- b. Would the proposed project include siting, construction, and operation of temporary pilot-scale waste collection and treatment facilities or pilot-scale waste stabilization and containment facilities? ☐ No ☐ Yes (describe)

- c. Would the proposed project involve operations of environmental monitoring and control systems?
☐ No ☐ Yes (describe)

- d. Would the proposed project involve siting, construction, operation, or decommissioning of a facility for storing packaged hazardous waste for 90 days or less? ☐ No ☐ Yes (describe)

E. REGULATORY COMPLIANCE

1. For the following laws, describe any existing permits, new or modified permits, manifests, responsible authorities or agencies, contacts, etc., that would be required for the proposed project

- a. Resource Conservation and Recovery Act (RCRA): ☐ None ☐ New Required ☐ Modification Required
Describe:

- b. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):
☐ None ☐ New Required ☐ Modification Required
Describe:

- c. Toxic Substance Control Act (TSCA): ☐ None ☐ New Required ☐ Modification Required
Describe:

- d. Clean Water Act (CWA): ☐ None ☐ New Required ☐ Modification Required
Describe:

- e. Underground Storage Tank Control Program (UST): ☐ None ☐ New Required ☐ Modification Required
Describe:

- f. Underground Injection Control Program (UIC): ☐ None ☐ New Required ☐ Modification Required
Describe:

- g. Clean Air Act (CAA): ☐ None ☐ New Required ☐ Modification Required
Describe:

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- h. Endangered Species Act (ESA): ☐ None ☐ New Required ☐ Modification Required
Describe:

- i. [Floodplains and Wetlands Regulations](#): ☐ None ☐ New Required ☐ Modification Required
Describe:

- j. Fish and Wildlife Coordination Act (FWCA): ☐ None ☐ New Required ☐ Modification Required
Describe:

- k. National Historic Preservation Act (NHPA): ☐ None ☐ New Required ☐ Modification Required
Describe:

- l. Coastal Zone Management Act (CZMA): ☐ None ☐ New Required ☐ Modification Required
Describe:

2. Identify any other environmental laws and regulations (Federal, state, and local) for which compliance would be necessary for this project, and describe the permits, manifests, and contacts that would be required.

- F. DESCRIBE ANY ISSUES THAT WOULD GENERATE PUBLIC CONTROVERSY REGARDING THE PROPOSED PROJECT. ☐ None

- G. WOULD THE PROPOSED PROJECT PRODUCE ADDITIONAL DEVELOPMENT, OR ARE OTHER MAJOR DEVELOPMENTS PLANNED OR UNDERWAY, IN THE PROJECT AREA?

☐ No ☐ Yes (describe)

- H. SUMMARIZE THE SIGNIFICANT IMPACTS THAT WOULD RESULT FROM THE PROPOSED PROJECT.

☐ None (provide supporting detail) ☐ Significant impacts (describe)

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

I. PROVIDE A DESCRIPTION OF HOW THE PROJECT WOULD BE DECOMMISSIONED, INCLUDING THE DISPOSITION OF EQUIPMENT AND MATERIALS.

III. CERTIFICATION BY PROPOSER

I hereby certify that the information provided herein is current, accurate, and complete as of the date shown immediately below.

Signature: 

Date (mm/dd/yyyy): 05/17/2023

Typed Name: Curtis Thayer

Title: Executive Director

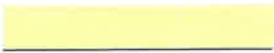
Organization: Alaska Energy Authority

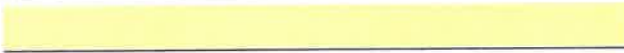
IV. REVIEW AND APPROVAL BY DOE

I hereby certify that I have reviewed the information provided in this questionnaire, have determined that all questions have been appropriately answered, and judge the responses to be consistent with the efforts proposed.

DOE Project Manager

Signature: 

Date (mm/dd/yyyy): 

Typed Name: 

Community Benefits Plan

Alaska Energy Authority (AEA) has a successful record partnering both as owner and project manager in community capital projects and in advancing State energy goals and priorities. AEA also has established relationships with tribal entities, local governments, and other State departments, with a focus on workforce, permitting, and community development. Early engagement with these stakeholders will help to ensure that the project is responsive to local energy plans and goals.

AEA administers the Power Cost Equalization (PCE) program – an endowed fund source with more than \$1 billion in assets – that provides economic assistance to communities and residents of rural electric utilities where the cost of electricity can be three to five times higher than for customers in more urban areas of the state. AEA, along with the Regulatory Commission of Alaska (RCA), administers the program that serves 82,000 Alaskans in 193 communities that are largely reliant on diesel fuel for power generation. AEA works to address and overcome challenges within these disadvantaged communities on a monthly basis.

AEA and Alaska’s public and cooperative utilities are accustomed to engaging with local governments and tribal entities through permitting and regulatory processes for rural energy projects. The applicable projects would establish milestones urging earlier dialogue with local governments and Tribal entities. These conversations should begin sufficiently early in order to inform project development in response to local communities’ needs and concerns. Local governments and Tribal entities are uniquely situated to help identify the most effective actions the projects can take toward partnerships that advance workforce issues; diversity, equity, inclusion, and accessibility; and the flow of project benefits to disadvantaged communities.

AEA and partner utilities have extensive experience engaging with residents and businesses in town halls and similar formats. AEA is a public entity with obligations to reduce the cost of energy in Alaska, in the public interest. In addition, AEA’s Circuit Rider Program provides skilled labor to address, diagnose, and repair rural powerhouses. In addition, the Circuit Rider Program provides training for local communities to create skilled power plant labor. As rural microgrids shift towards renewable systems, AEA will ensure that the Circuit Rider Program adapts and continues to support and train local communities in the use of improved power systems.

This project’s Community Benefits Plan anticipates that community benefits will accrue within each project period as part of project activities, and as part of its objectives and outcomes.

Aligning Project with Best Practices

An [NREL study on distributed renewables for Arctic energy](#)¹, found that community buy-in and ownership is essential, as this extract demonstrates and the project anticipates and responds to. AEA knows that projects must be community-driven and supported, with community members understanding and participating in the value proposition of moving to a stronger reliance on renewable energy. It is critical to include and receive buy-in from key stakeholders like utility managers, operators, project champions, and local government officials. Beyond project development, community engagement must be ongoing, and continue after the project is deployed to maintain community support and ownership. Long-term engagement is an essential element of sustainability.

- For example, a strong community focus enabled a successful project in Kongiganak: the community trained and retained a local workforce, built community trust through presentations in village meetings, and received community leader and tribal council support. In Galena, hiring and training an all-local workforce provided enhanced job satisfaction, increased local capacity, and strengthened the community overall.

AEA is planning to ensure that proposed systems should be commensurate with the training, education, and availability of the local workforce, through the on-going relationship with the Alaska Vocational Technical Center (AVTEC) and the appropriate labor unions. AEA knows that the use of community-appropriate technology reduces system failures and the community's dependence on long-term, expensive, external assistance. Local capacity will determine how simple or complex the system should be, and what assets it can include. Robust operations and maintenance plans must be considered from the start, and technical assistance provided to complete and maintain these. Communities have found that small, easy-to-maintain pilot systems with solar photovoltaics (PV), batteries, and/or wind can be a good stepping-stone to larger, more complex systems with higher contributions of renewable energy. Community-based technical capacity may be increased over time through community education and expanded experience from operating power systems. Many communities have been successful in engaging local youth, with energy providers gaining traction by speaking through credible, community-based educators.

- In Kotzebue, installing small wind turbines provided the technical capacity for subsequent installations of much larger wind turbines, batteries, and solar PV systems. In Galena, a focus on community education and training allowed the community to perform increasing portions of system maintenance locally and has enabled it to set its sights on future solar projects.

AEA knows that having a regional or statewide pool of support resources increases the likelihood of success, which its cohort and technical assistance approach will support. Having a network of knowledgeable people actively engaged in operating projects, such as an energy cooperative, that can provide targeted education or technical knowledge, increases the likelihood of project success, and can allow communities to install systems that they may not be able to support on their own. Allowing a process for communities to access this network will streamline the renewable energy development process including planning, financing, installation, and operations. Such a network is especially helpful for small communities with limited human capital. A face-to-face knowledge sharing network would increase the number and success rate of community projects.

- Kongiganak is part of the Chaninik Wind Group (CWG), which helps secure wind energy project funding, shares training expenses, builds local capacity, and reduces energy costs. The CWG has built projects in each of its six member communities, leveraging the capacity built from each successful project.

AEA will identify and support competent, practical project managers that are required to ensure the project's success. The technical, financial, managerial, and community engagement components of a renewable energy project must be overseen by experienced personnel to help ensure effective delivery of projects. Managers must be able to validate project proposals from engineers and external entities, compare those proposals to community needs, and decline when necessary. Some communities also face rapid turnover of bookkeeping and managerial staff,

reducing their financial and managerial capacity for projects. Such seemingly minor problems can have long-term impacts.

- In Kodiak, early renewable projects failed due to insufficient engineering and project management. Since then, a renewed focus on these components has enabled successful projects.

Community and Labor Engagement

Engaging with labor unions, local governments, and Tribal entities.

AEA and partners have established, long-term, and mutually valued relationships with the organized labor community in Alaska. Larger development often occurs within collective bargaining agreements of the International Brotherhood of Electrical Workers (IBEW) and the various trade unions, depending on location. While this is very much about scale, the Alaska approach will be to engage its labor partners early to initiate discussions toward labor agreements and overall benefits of the project. Alaska Municipal League (AML) will establish a relationship with the Alaska American Federation of Labor and Congress of Industrial Organization (AFL-CIO) to assess the impact of project development on future community benefits and labor engagement. AEA has included in its timeline and milestones to discuss with organized labor the need for local and targeted hiring goals, card-check neutrality, and possible provisions advancing programs to attract, train and retain new workers.

- * **Milestone:** Produce summary of labor perspectives on rural renewable energy development and benefits thereof.

AML is a critical part of the project's community engagement, as it represents all city and borough (county-equivalent) governments in the state. While AEA and other partners are accustomed to engaging with local and Tribal governments through permitting and regulatory processes for capital projects, AML will be in a position to reach out directly to incorporate municipal perspectives and priorities into the project design and outputs. At the same time, Alaska Native Tribal Health Consortium (ANTHC) presents incredible opportunities to work with Tribal governments and regional Tribal organizations to ensure that Tribal engagement is beneficial to the project and community. The project anticipates that community engagement will be initiated early and conducted often to inform project development and implementation. Local and Tribal governments are uniquely situated to help identify the most effective actions the projects can take toward partnerships that advance workforce issues; diversity, equity, inclusion, and accessibility; and the flow of project benefits to disadvantaged communities.

- * **Milestone:** Establish municipal/Tribal working group to inform process and final product.

Workforce and Community Agreements

Partners anticipate that there will be opportunities for workforce or community strategies to be established as a direct result of the project. AML will be responsible through its stakeholder engagement role to work with community leaders to identify ways in which the project benefits can best accrue to the community. This will include planning for environmental justice, carbon reduction, workforce development, shared procurement, local hire, and asset management, including maintenance and operations planning and technical assistance. AML will reference DOE's [Community Benefit Agreement Toolkit](#)², recognizing that it doesn't apply the same to federal projects as private, its intended purpose. The outcome of the CBA will be CBAs 40% percent of benefits should be allocated to communities of color, Indigenous peoples,

low-income communities, and other marginalized groups. Each project will evaluate the opportunity for workforce agreements, as well, which will help ensure equity for women, people of color, and other historically disadvantaged or underrepresented groups in the project's implementation. Project sponsors will work through a facilitated community stakeholder process to identify ways in which workforce goals will be met. Goals include local hire, family-supporting jobs (wage parity), health insurance, diverse workforce, diverse workforce participation, and resources for continuing education and certification that result in a highly skilled workforce. Contractor solicitation should reference these goals as part of criteria for an award.

* Milestone: Community Benefit Strategies will be established with each participating community, and Workforce Agreements with project sponsors.

Approach to apprenticeships and local hiring goals

AML will maintain a local workforce availability and hire tracking system throughout the life of the project, enabling local hire goals to be met and cross-promoting hire between projects that might occur within a region. This system will also track municipal and tribal workforce in-kind contributions, staff time that is applied to the project planning and implementation.

The project team will work with the University of Alaska (UA), AVTEC, and Alaska Works Partnership to identify ways in which training, apprenticeships and local hiring can benefit from microgrid implementation. In addition, the project will reference the Alaska Workforce Investment Board's strategies for workforce development, found in its [Combined Plan for Workforce Innovation and Opportunity](#)³.

The UA is an important mechanism for workforce development, including for apprenticeships. 20 years ago, the University of Alaska Anchorage (UAA) created the Associate of Applied Science in Apprenticeship Technologies. The University of Alaska System, the UAA Community and Technical College, and several joint apprenticeship training programs have joined the United States Department of Labor (USDOL) Registered Apprenticeship-College Consortium, which simplifies the process for an apprentice to earn college credit.

Alaska Works Partnership is a non-profit organization that gives Alaskans access to jobs and careers in the construction industry. Alaska Works educates Alaskans about good paying jobs, teaches basic skills, and establishes pathways for Alaskans to learn skills that last a lifetime and earn good pay with health care and retirement benefits. Alaska Works was created by Alaska's Building and Construction Trade and their apprenticeship training trusts in 1996. Alaska Works partners with industry employers, community organizations, educators and the State of Alaska to develop Alaska's workforce. Several thousand Alaskans living in over 140 communities have gotten a start in construction through one of their programs, illustrated below.

- Apprenticeship Outreach
- Alaska Construction Academy
- Helmets to Hardhats
- Women in the Trades
- Building Maintenance

* Milestone: Training and outreach includes pathways to apprenticeship and training programs.

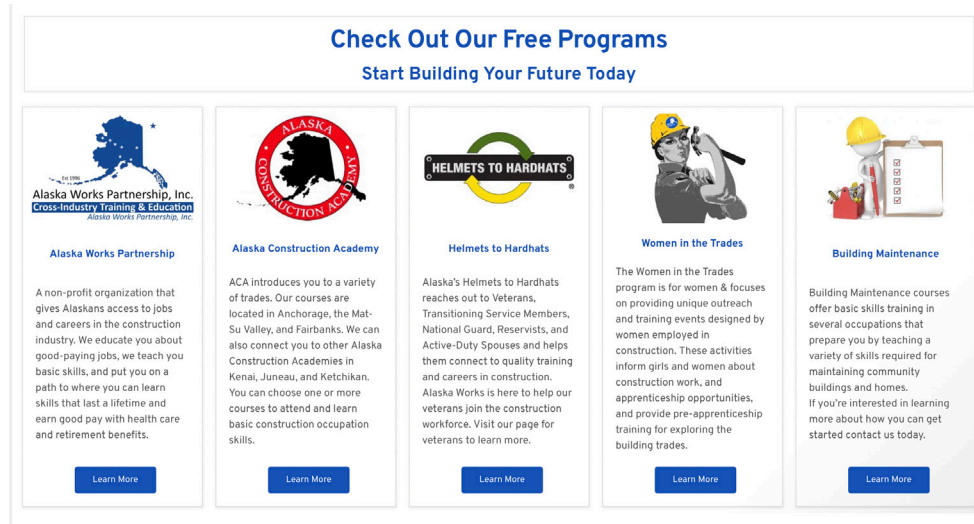


Figure 1: Programs offered by Alaska Works Partnership.

Documented community and labor partnerships

Both AML and ANTHC have inclusive and documented community partnerships. As member organizations, the two include municipal and Tribal governments in important ways and will ensure these perspectives and priorities are included in project design and implementation, and that outcomes are consistent with community interests. AML is working toward a teaming agreement with the Alaska AFL-CIO, which will inform future labor engagement. Labor agreements are otherwise developed at the project level and specific to community needs. AML will work through the Alaska AFL-CIO to provide project sponsors the opportunity to engage labor councils within regional districts.

* Provide documentation of teaming agreement with the Alaska AFL-CIO in first year.

Investing in the American Workforce

This project has the ability to result in increased investment in America's workforce. This project results in job creation and business development, and a team subcommittee will work through AML to engage with the Alaska Small Business Development Center to identify ways in which this can be maximized, not just in project development and delivery, but in the long-term. USDA's Economic Risk Assessment Dashboard tracks COVID, Community Distress, Unemployment, and Social Equity and is a good example of where economic benefits might accrue. It produces a dashboard for Alaska that identifies fully half the state by geography as distressed, more than any other state in the nation. The majority of project-funded activities will occur in these distressed regions of Alaska.

Creation and retention of quality jobs

1) Plan to attract, train, and retain a skilled and well qualified workforce.

The majority of the work involved will be by partner staff, current and future. Contracts from the project sponsor will be available to partners, depending on scope and competency, and the goal of the project team is to maximize the investment in that workforce. In this way the project team can ensure that it is able to foster safe, healthy, and inclusive workplaces with equal opportunity, free from harassment and discrimination. In addition, the partners have considered ways in which to make investments in training, education, and skill development and supporting the corresponding mobility of workers to advance in their careers. The project will assess collective bargaining agreements as identified through the life of the project.

i. Wages, benefits, and other worker support provided.

The project sponsor and partners approach to quality jobs means that project staff will have (1) fair, transparent, and equitable pay that exceeds the local average wage for an industry, while delivering; (2) basic benefits (e.g., paid leave, health insurance, retirement/savings plan); (3) providing workers with an environment in which to have a collective voice; and (4) helps the employee develop the skills and experiences necessary to advance along a career path. In addition, the partners will offer good jobs that provide (5) predictable scheduling, and a safe, healthy, and accessible workplace devoid of hostility and harassment. With good jobs, (6) employees are properly classified with the limited use of independent contractors and temporary workers. Workers have a (7) statutorily protected right to a free and fair choice to join a union under the National Labor Relations Act (NLRA).

ii. Commitments to support workforce education and training.

The partners will encourage project staff to participate in training programs and encourage contractors to offer paid time for employees to participate in skills training. This will include the provision of personalized, modularized, and flexible skill development opportunities, such as on-demand and self-directed virtual training. This will be included as part of the cohort support system established through the project. The project will identify and provide continuing education programs for employees to earn credentials and degrees relevant to their career pathways.

* Milestone: Include workforce education and training opportunities in training and technical assistance.

* Produce a guide for communities that includes methods by which to reduce employee turn-over costs for employers, increases productivity from a committed and engaged workforce, and promotes a stable workforce for projects in the community.

Advancing Diversity, Equity, Inclusion, and Accessibility

The project team recognizes the value of a meaningful and targeted approach to advancing diversity, equity, inclusion, and accessibility. The following is a description of the methodology the team will implement in project design and implementation.

Equity: Project partners have shared commitments to 1) build a diverse workforce, supported by equitable operations and policies, and establish an informed culture that delivers authentic inclusivity; 2) promote economic opportunity for Alaskans through transportation investments, including working with businesses owned by Black, Indigenous, People of Color, women, and others who have been historically and/or are currently marginalized; 3) utilize the viewpoints of those who reside in the communities and who are likely to be affected by the outcomes of the project; and 4) invest in the protection of marginalized communities from environmental hazards.

Diversity: Project partners have shared commitments to 1) a workforce that is talented, diverse, and committed to fostering a safe, fair, and inclusive workplace; 2) ensure all voices, regardless of social identity or social demographics, are heard and their views influence project decisions; 3) work with stakeholder groups to aid in communication with the community and project personnel.

Inclusion: Project partners have shared commitments to 1) include the diverse perspectives within this project's scope and deployment; 2) leveraging investments and increasing pathways to opportunity for minority-owned and disadvantaged business enterprises, and for individuals who face systemic barriers; 3) meaningful engagement with communities that are diverse and underrepresented in the creation and implementation of the programs and projects

that impact the daily lives of their communities by creating more transparent, inclusive, and on-going consultation and collaboration process; 4) ensure the project includes practices based on community engagement to avoid harm to frontline and vulnerable; and 5 provide training to staff to promote inclusion internally and externally.

Accessibility: Project partners have share commitments to 1) strengthen accountability policies and procedures, create a more accessible and disability-inclusive workplace, and foster a greater respect for religious diversity; 2) ensure that reasonable accommodations are handled with tact and care to provide community members as well as employees the opportunity to fully participate in project activities; 3) develop and implement a process to Increase awareness of accessibility tools and disability inclusion; 4) review and evaluate disability inclusion policies and practices in crisis and emergency management including, but not limited to, planning and response for pandemics, disasters, and evacuations in the domestic context; 5) examine options to enhance technological accessibility; and 6) increase awareness of religious accommodations.

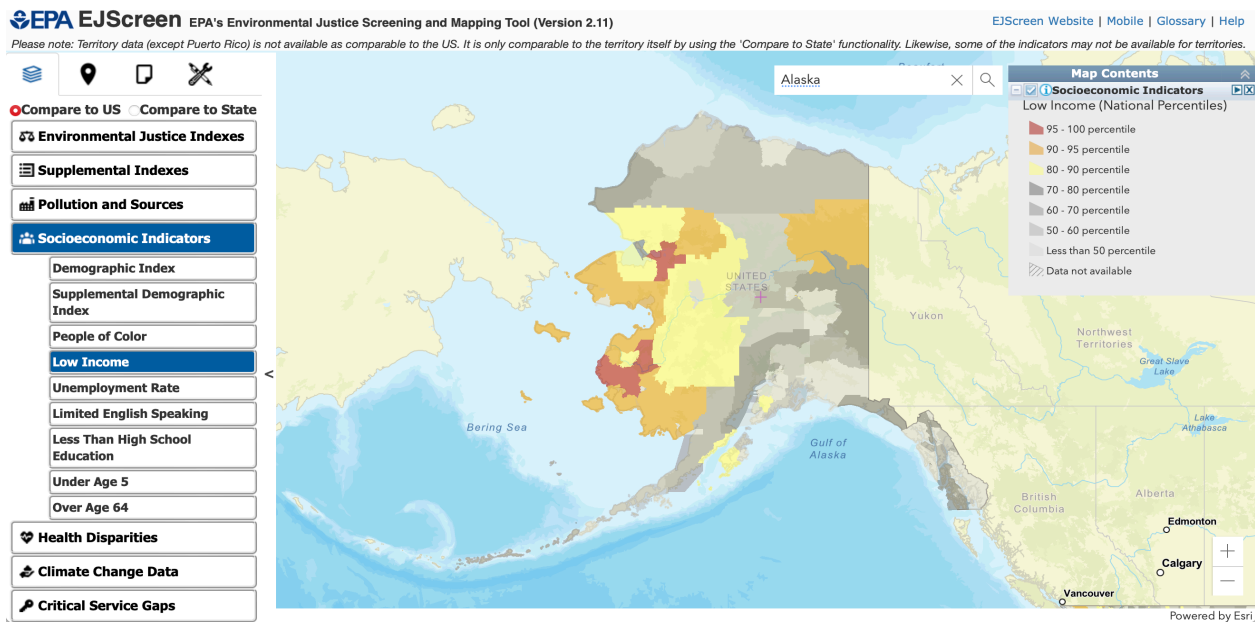


Figure 2: EPA EJScreen Low Income Regions in Alaska.

1. Justice 40 Initiative

AEA's rural microgrid transformation is a statewide effort that will result in projects in approximately 20 communities. The project team has utilized a variety of tools to assess disadvantage. EPA's EJScreen identifies areas of the state experiencing low income, for instance. This is generally consistent with where Power Cost Equalization (PCE) communities fall in AEA's 10 rural energy

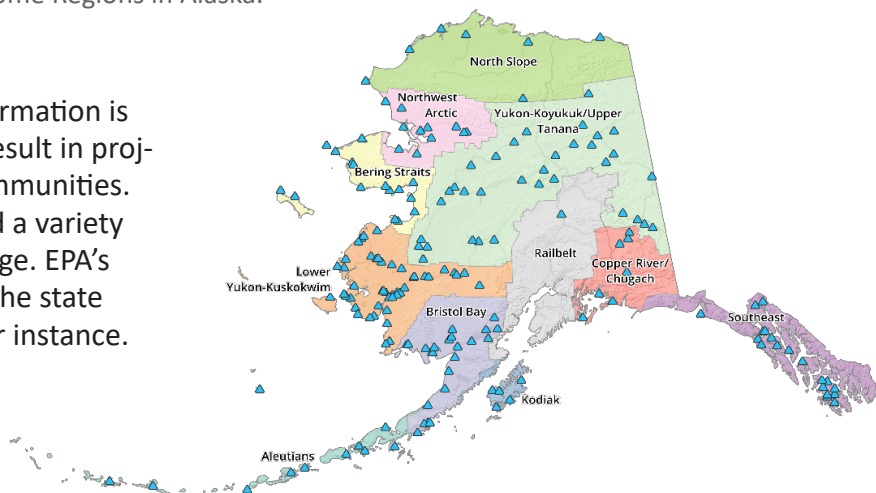


Figure 3: 193 PCE Communities that AEA works with monthly.

regions, where high cost is relative to an average of three urban communities. Excluding the Railbelt, which accounts for 75% of Alaska’s population, this project will focus on eligible projects in rural communities that are considered disadvantaged or Tribal. Disadvantaged communities within the Railbelt will be eligible as long as they are also rural.

The table below demonstrates for relevant census areas and boroughs (county equivalent), their FIPS identification for reference, population, Rural status according to the Office of Management and Budget (OMB), their social vulnerability index according to the Centers for Disease Control and Prevention (CDC), whether they are Areas of Persistent Poverty according to United State Department of Transportation (USDOT), whether they are difficult to develop according to Department of Housing and Urban Development (HUD), and whether the Denali Commission considers communities within Distressed.

City/Borough	FIPS*	Pop.	Rural (OMB)	National SVI* Ranking (CDC)	APP* (DOT)	DDA* (HUD)	Distressed Communities
Aleutians East Borough	2013	3,515	Yes	Moderate to High	No	Yes	No
Aleutians West Census Area	2016	5,723	Yes	Low to Moderate	No	Yes	No
Bethel Census Area	2050	18,216	Yes	High	Yes	Yes	Yes
Bristol Bay Borough	2060	877	Yes	Low to Moderate	No	No	Yes
Valdez- Cordova Census Area	2063	9,202	No	Low to Moderate	No	No	Yes
Denali Borough	2068	2,059	Yes	Low	No	Yes	Yes
Dillingham Census Area	2070	5,000	Yes	High	No	Yes	Yes
Haines Borough	2100	2,474	Yes	Low	No	No	Yes
Hoonah- Angoon Census Area	2105	2,151	Yes	Low to Moderate	No	No	Yes
Ketchikan Gateway Borough	2130	13,918	Yes	Moderate to High	No	Yes	Yes
Kodiak Island Borough	2150	13,345	Yes	Moderate to High	No	Yes	Yes
Kusilvak Census Area	2158	8,049	Yes	High	Yes	No	Yes
Lake and Peninsula Borough	2164	1,587	Yes	High	No	No	Yes
Nome Census Area	2180	10,008	Yes	High	No	Yes	Yes
North Slope Borough	2185	9,872	Yes	Moderate to High	No	Yes	Yes
Northwest Arctic Borough	2188	7,671	Yes	High	No	Yes	Yes
Wrangell- Petersburg Census Area	2195	5,910	Yes	Moderate to High	No	Yes	Yes
Prince of Wales – Hyder Census Area	2198	6,422	Yes	High	No	No	Yes
Sitka	2220	8,458	Yes	Low to Moderate	No	No	No
Skagway	2230	1,240	Yes	Low	No	Yes	No
Southeast Fairbanks Census Area	2240	6,918	Yes	Moderate to High	No	Yes	Yes
Wrangell	2275	2,127	Yes	Moderate to High	No	No	Yes
Yakutat	2282	662	Yes	Moderate to High	No	Yes	No
Yukon- Koyukuk Census Area	2290	5,327	Yes	High	Yes	No	Yes

An equity assessment will be conducted as part of project identification and as part of the award process. This will include review of available datasets to ensure distribution of project benefits to 40% disadvantaged communities, and to structure ways in which project sponsors and contractors can implement strategies that maximize equitable benefits.

2. Identification of applicable benefits that are quantifiable, measurable, and trackable.

The project's technical point of contact at AEA will track project benefits that are quantifiable and measurable. Baseline measures will be secured prior to project implementation, and measured at the conclusion of each project for a pre- and post-project assessment.

Benefits	Quantifiable	Measure	Tracking
Decrease in Energy Burden	Tbtu / Million \$	Site Energy Savings	
Energy Costs Savings	2009 Baseline – annual and cumulative		
Decrease in environmental exposure	MMT	CO2 Reduction	2009 Baseline – annual and cumulative
Increase in access to low-cost capital	Million \$	Capital availability	AAHA report on access to capital
Increase in job creation and training	Job #s	Jobs and training opportunities	ASHBA report/DOL&WD
Increase in clean energy jobs and enterprise creation	Business #s	Business development	ASHBA report/AKSBDG
Increase in community ownership	Municipal code	Adoption or revision	Community reporting/AML
Increased parity in clean energy technology access and adoption	Municipal code	Energy technology reference	Community reporting/AML

3. Anticipated Negative and Cumulative Environmental Impacts on disadvantaged communities.

While EPA's EJScreen does not include sufficient data to assess the potential impact of the project to disadvantaged communities, the project team recognizes the research that exists to describe the value and impact of renewable energy development generally.

Fuel transportation to remote Alaskan communities is becoming more susceptible to climate-related disruptions. In these communities, fuel is typically delivered by barge, which for inland communities is only available during the summer when the rivers are free of ice. Changes in river paths, low water levels, increasing sediments, or unexpected storms can put shipments at risk, leaving a community without the energy stores needed to meet high heating loads during the long winter. Alternative methods of delivery, such as ice roads and winter-based overland routes, are becoming less secure as the climate warms. The emergency alternative—flying diesel in on small planes or even by helicopter—increases costs exponentially, with some communities paying over \$16/gallon (Hughes 2022). Burning diesel also releases greenhouse gases and other pollutants, accelerating climate change and reducing local air quality. The effects of climate change are being experienced acutely in Arctic regions like Alaska, as melting permafrost further reduces transportation options and puts building foundations at risk.

Remote Alaskan communities have and will continue to lead in community-based renewable energy development, serving as an example for similar communities throughout the world.

Many communities have excellent wind, solar, hydropower or biomass resources waiting to be used. 69 Alaskan communities have so far integrated some form of renewable energy⁴, and between 2014 and 2018, 5,210 households in rural Alaska received building energy efficiency improvements to reduce overall energy demand⁵. A variety of funding sources and programs are available to support communities in the complex transition to renewable energy. Remote locations may be rich in renewable energy sources, but the intermittent nature makes their integration into the power grid a challenge.

AEA's approach to innovative microgrid solutions includes grid stabilization technology that enables high penetration of renewable power generation, and distributed control systems that provide intelligent power management and efficient hybrid power plant operation. By addressing integration issues, AEA is maximizing deployment of locally based renewable energy resources.

Energy planning can offer enhanced protection against the threats of natural disasters and terrorism to make our communities more resilient, sustainable and livable for generations to come, which lowers the price of mitigation for building owners. The many challenges to public health and safety and environmental sustainability in our increasingly complex global society call for a holistic approach to public policy development and business models, including how we construct buildings. Thoughtful consideration of "performance goals" prior to taking action is important for budget planning and for establishing priorities, such as: public health and safety; protection of ecosystems and the important functions they serve; accessibility and mobility for all citizens; affordable housing; and economic sustainability. Implementation of new policies and practices should start by identifying the intersections and synergies that will achieve the performance goals (which may change) in the most responsible and cost-effective way possible.

USDA Rural Development has data identifying [Distressed Energy Communities](#)⁶, which covers a large swath of Alaska. These are regions that will benefit most from locally sourced renewable energy projects. This will be part of the project review process for evaluation of eligibility and competitiveness.

4. Benefits to Disadvantaged Communities.

Disadvantaged communities will directly and indirectly benefit from the outcomes of the project activities. By inclusive engagement in project development, scoping, and implementation, disadvantaged communities will be exposed to learning opportunities that will enable them to improve current practices and policies. Upon completion, the projects will provide public health and safety benefits to communities.

* [Milestone: Stakeholder exit interviews indicate benefits from process and outcomes, and incorporation of asset management principles for long-term sustainability.](#)

One of the hallmarks of this project will be the high level of technical assistance provided to project sponsors and to potential applicants.

- *A cohort approach* – Each year's project awardees will participate in an ever-expanding cohort, which will feature the addition of project awardees in the following years. Awardees will participate in quarterly web-based sessions that provide resources and trainings on project and grant management, asset management, maintenance and operations, and governance and financial sustainability.

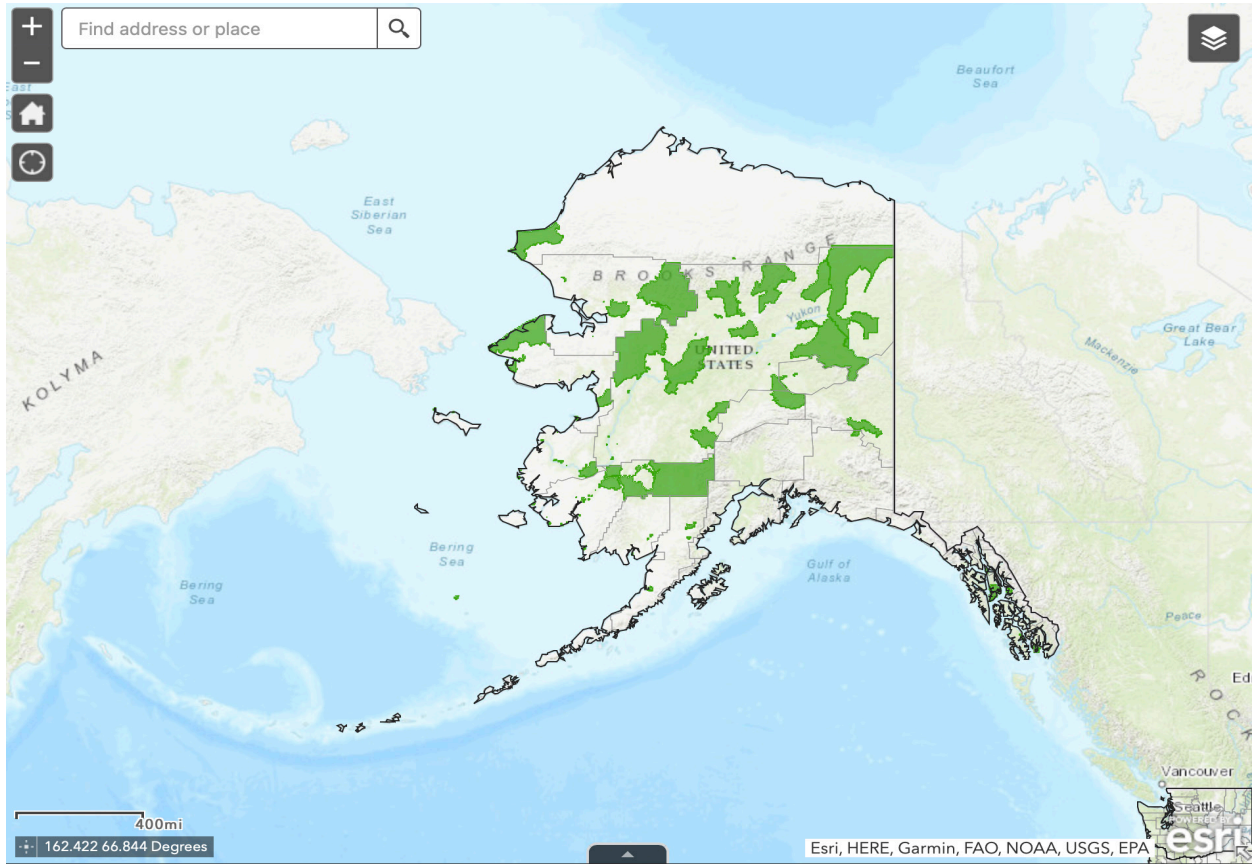


Figure 4: USDA RD Distressed Energy Communities.

- *Technical assistance* – Potential applicants, or applicants whose applications aren't accepted in an award cycle, will be provided additional levels of support by project partners. AML and ANTHC will provide project development and application support to strengthen capacity for applications to be more successful, not just through this program but for other federal opportunities.
- *Leveraging financial opportunities* – Funded projects will be evaluated by a team at AIDEA and in collaboration with project partners to determine feasibility of leveraging private capital, or other funding sources, to maximize the available federal funding and to increase the overall local contribution. This process will also identify ways in which rates will have to be structured for future maintenance and operations.

Monitoring and Evaluation

AEA will ensure that milestones are being met and that communities receive support necessary to track and report quarterly progress that includes surveying of stakeholders to determine the extent to which projects are on track to achieve beneficial outcomes for disadvantaged communities. Communities with little capacity will receive support from AML and ANTHC to track and report without adding to their operational burdens.

The project team has built into the performance periods a gap year during which extensive process review will identify any weaknesses in the program delivery. Project sponsors will be interviewed to learn about challenges and solutions, which will be applied to redevelopment of the program, as necessary, to strengthen implementation through the life of the rest of the project.

The final year of the project will ensure that all microgrid conversions are completed in a timely and effective manner, consistent with scope and objectives. The project team will complete its evaluation process with an in-person workshop that includes a comprehensive review of all projects, project delivery, stakeholder engagement, and community benefits.

A summary of findings will be released as a result of the project, developed in collaboration with participating communities and project sponsors, and shared with those communities and the public at large. This approach will ensure that learning drives future performance.

Endnotes

¹ <https://www.nrel.gov/docs/fy23osti/84391.pdf>

² <https://www.energy.gov/diversity/community-benefit-agreement-cba-toolkit>

³ https://awib.alaska.gov/pdf/WIOA_plan_2022-2023.pdf

⁴ McMahon et al. 2022

⁵ Alaska Housing Finance Corporation, 2018

⁶ <https://ruraldevelopment.maps.arcgis.com/apps/webappviewer/index>.



Figure 5: Twin Hills, Alaska.

Potentially Duplicative Funding Notice

If the applicant or project team member has other active awards of federal funds, the applicant must determine whether the activities of those awards potentially overlap with the activities set forth in its application to this FOA. If there is a potential overlap, the applicant must notify DOE in writing of the potential overlap and state how it will ensure any project funds (i.e., recipient cost share and federal funds) will not be used for identical cost items under multiple awards. Likewise, for projects that receive funding under this FOA, if a recipient or project team member receives any other award of federal funds for activities that potentially overlap with the activities funded under the DOE award, the recipient must promptly notify DOE in writing of the potential overlap and state whether project funds from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under the DOE award. If there are identical cost items, the recipient must promptly notify the DOE Contracting Officer in writing of the potential duplication and eliminate any inappropriate duplication of funding.

Project Title: Rural Alaska Microgrid Transformation

Topic Areas 3: Grid Innovation Program

Alaska Energy Authority does not have other active federal awards that would overlap with the scope of work under the proposed scope in this application.



Curtis Thayer, Executive Director

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

OMB Number: 4040-0013
Expiration Date: 02/28/2025

1. * Type of Federal Action: ☐ a. contract ☒ b. grant ☐ c. cooperative agreement ☐ d. loan ☐ e. loan guarantee ☐ f. loan insurance	2. * Status of Federal Action: ☐ a. bid/offer/application ☒ b. initial award ☐ c. post-award	3. * Report Type: ☒ a. initial filing ☐ b. material change
4. Name and Address of Reporting Entity: ☒ Prime ☐ SubAwardee * Name Alaska Energy Authority * Street 1 813 W. Northern Lights Blvd. Street 2 * City Anchorage State AK: Alaska Zip 99503 Congressional District, if known: AK-001		
5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime: 		
6. * Federal Department/Agency: Department of Energy	7. * Federal Program Name/Description: Grid Infrastructure Deployment and Resilience CFDA Number, if applicable: 81.254	
8. Federal Action Number, if known: DE-FOA-0002740	9. Award Amount, if known: \$	
10. a. Name and Address of Lobbying Registrant: Prefix * First Name Middle Name * Last Name Suffix * Street 1 Street 2 * City State Zip		
b. Individual Performing Services (including address if different from No. 10a) Prefix * First Name Middle Name * Last Name Suffix * Street 1 Street 2 * City State Zip		
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure. * Signature:  * Name: Prefix Mr. * First Name Curtis Middle Name * Last Name Thayer Suffix Title: Executive Director Telephone No.: 907-771-3000 Date: 05/17/23		
Federal Use Only:		Authorized for Local Reproduction Standard Form - LLL (Rev. 7-87)

Application for Federal Assistance SF-424

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

Completed by Grants.gov upon submission.

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Alaska Energy Authority

* b. Employer/Taxpayer Identification Number (EIN/TIN):

92-6001185

* c. UEI:

F3N8ZSHJXUH8

d. Address:

* Street1: 813 W. Northern Lights Blvd.

Street2:

* City:

Anchorage

County/Parish:

* State:

AK: Alaska

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

99503-2407

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

Mrs.

* First Name:

Rebecca

Middle Name:

* Last Name:

Garrett

Suffix:

Title: Rural Programs Manager

Organizational Affiliation:

* Telephone Number: 907-771-3042

Fax Number:

* Email: rgarrett@akenergyauthority.org

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

National Energy Technology Laboratory

11. Catalog of Federal Domestic Assistance Number:

81.254

CFDA Title:

Grid Infrastructure Deployment and Resilience

* 12. Funding Opportunity Number:

DE-FOA-0002740

* Title:

BIL Grid Resilience and Innovation Partnerships (GRIP)

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Transforming Alaska's Rural Micrgrids

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:*** a. Applicant * b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):**

* a. Federal	250,000,000.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	250,000,000.00
* f. Program Income	0.00
* g. TOTAL	500,000,000.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title: * Telephone Number: Fax Number: * Email: * Signature of Authorized Representative: * Date Signed:

5/17/23

Locations of Work (DE-FOA-0002740)

[illegible]

PROJECT DESCRIPTION AND ASSURANCES DOCUMENT (PDAD)

Project title: Rural Alaska Microgrid Transformation

Applicant Name: Alaska Energy Authority

Applicant Address: 813 W. Northern Lights Blvd. Anchorage, AK 99503

Names of all team member organizations:

- Alaska Municipal League
- Alaska Center for Energy and Power
- Alaska Native Tribal Health Consortium

Principal Investigator: Rebecca Garrett 907-771-3044 rgarrett@akenergyauthority.org

Business Point of Contact: Curtis Thayer, 907-771- 3009 cthayer@akenergyauthority.org

Federal Share: \$250,000,000

Cost Share: \$250,000,000

Total Estimated Project Cost: \$250,000,000

Any statements regarding confidentiality: **None**

Item 1:

Specify (mark with "X") the FOA Topic Area and as applicable the Area of Interest (AOI):

 X Topic Area 3: GRIP Innovation Program

Topic Area 3 Specific

Item 6:

Applicant organization

 X a State

Item 7:

Authorized Organizational Representative (AOR): please provide name, address, phone number and email address for the authorized agent to bind the entity.

Authorized Organizational Representative (AOR):

Name: Curtis Thayer, Chief Executive Officer

Address: 813 W. Northern Lights Blvd. Anchorage, AK 99503

Phone: 907-771-3009

E-mail: cthayer@akenergyauthority.org

Item 8 Signature of Organizational Representative (AOR)





Confirmation

Thank you for submitting your grant application package via Grants.gov. Your application is currently being processed by the Grants.gov system. Once your submission has been processed, Grants.gov will send email messages to advise you of the progress of your application through the system. Over the next 24 to 48 hours, you should receive two emails. The first will confirm receipt of your application by the Grants.gov system, and the second will indicate that the application has either been successfully validated by the system prior to transmission to the grantor agency or has been rejected due to errors.

Please do not hit the back button on your browser.

If your application is successfully validated and subsequently retrieved by the grantor agency from the Grants.gov system, you will receive an additional email. This email may be delivered several days or weeks from the date of submission, depending on when the grantor agency retrieves it.

You may also monitor the processing status of your submission within the Grants.gov system by clicking on the "Track My Application" link listed at the end of this form.

Note: Once the grantor agency has retrieved your application from Grants.gov, you will need to contact them directly for any subsequent status updates. Grants.gov does not participate in making any award decisions.

IMPORTANT NOTICE: If you do not receive a receipt confirmation and either a validation confirmation or a rejection email message within 48 hours, please contact us. The Grants.gov Contact Center can be reached by email at support@grants.gov, or by telephone at 1-800-518-4726. Always include your Grants.gov tracking number in all correspondence. The tracking numbers issued by Grants.gov look like GRANTXXXXXXXXX.

If you have questions please contact the Grants.gov Contact Center: support@grants.gov
1-800-518-4726 24 hours a day, 7 days a week. Closed on federal holidays.

The following application tracking information was generated by the system:

Grants.gov Tracking Number:	GRANT13888586
UEI:	F3N8ZSHJXUH8
Submitter's Name:	Karin St. Clair
CFDA Number:	81.254
CFDA Description:	Grid Infrastructure Deployment and Resilience
Funding Opportunity Number:	DE-FOA-0002740
Funding Opportunity Description:	BIL Grid Resilience and Innovation Partnerships (GRIP)
Agency Name:	National Energy Technology Laboratory
Application Name of this Submission:	Rural Alaska Microgrid Transformation
Date/Time of Receipt:	May 18, 2023 05:18:30 PM EDT

TRACK MY APPLICATION – To check the status of this application, please click the link below:

https://apply07.grants.gov/apply/spoExit.jsp?p=web/grants/applicants/track-my-application.html&tracking_num=GRANT13888586

It is suggested you Save and/or Print this response for your records.



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✔ Created ✔ Forms Passed ✔ Completed and Notified AOR ✔ Submitted ✔ Agency Received «Back ?



DE-FOA-0002740 - PKG00278576
BIL Grid Resilience and Innovation
Partnerships (GRIP)
Department of Energy
National Energy Technology Laboratory

Application Filing Name: Rural Alaska Microgrid Transformation [Edit Name]
Workspace ID: WS01052315 Workspace Status: Submitted
AOR Status: Workspace has AOR Last Submitted Date: May 18, 2023
Workspace Owner: Karin St. Clair SAM Expiration Date: Apr 17, 2024
Opening Date: Nov 18, 2022
Closing Date: May 19, 2023
UEI: F3N8ZSHJXUH8

FORMS | VIEW APPLICATION | ATTACHMENTS | PARTICIPANTS | ACTIVITY | DETAILS

Workspace Actions:

Check Application Sign and Submit Reopen Delete

Application Package Forms - Users are encouraged to follow [antivirus best practices](#) when Downloading Instructions and Forms: Download Instructions » ?

Include in Package	Form Name (Click to Edit)	Requirement	Form Status	Last Updated Date/Time	Locked By	Actions
☒	Application for Federal Assistance (SF-424) [V4.0]	Mandatory	Passed	May 18, 2023 05:16:19 PM EDT	---	Lock Download Upload Reuse Webform
☒	Other Attachments Form [V1.2]	Mandatory	Passed	May 18, 2023 02:58:55 PM EDT	---	Lock Download Upload Reuse Webform
☒	Project/Performance Site Location(s) [V4.0]	Mandatory	Passed	May 18, 2023 03:00:06 PM EDT	---	Lock Download Upload Reuse Webform
☒	Budget Information for Non-Construction Programs (SF-424A) [V1.0]	Mandatory	Passed	May 18, 2023 05:18:07 PM EDT	---	Lock Download Upload Reuse Webform
☒	Disclosure of Lobbying Activities (SF-LLL) [V2.0]	Optional	Passed	May 18, 2023 02:59:28 PM EDT	---	Lock Download Upload Reuse Webform

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