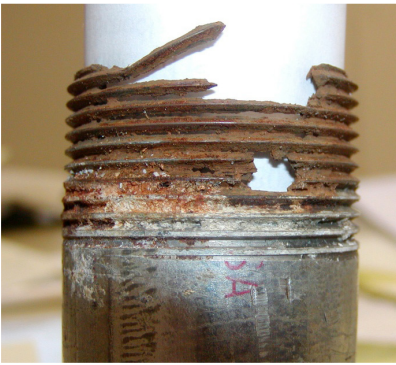


WORKPLAN

Increasing Resilience of Rural, Disadvantaged School Districts in Alaska



Section 1: Overall Project Summary and Approach

Reduction Measures

Provide a detailed description of each of the proposed GHG reduction measures to be undertaken.

Weatherization, energy efficiency measures, and beneficial electrification of Alaska's public schools has great potential to provide emissions reduction and broader community benefits through money saved on energy expenses. Importantly, these measures are among the short list of efforts that can be undertaken expediently and with the available expertise by resource-limited governmental entities. In Alaska, the public sector is one of the largest economic sectors. This is reflected in many small communities where public facilities, such as schools, are critical to human infrastructure, serving a changing role as lodging for out-of-town guests, emergency shelter, and community gathering space. AHFC's 2014 Energy Efficiency in Public Buildings Analysis, among other evidence, points clearly to the economic and environmental benefits.

These facilities are also a major driver of costs for governments that are already fiscally distressed or lack access to sufficient revenue to meet growing costs, especially when the buildings are not energy efficient and use expensive heating oil, which in some communities is priced [as high as \\$13/gallon](#). The proposed actions support programs by public entities that promote greater energy efficiency through weatherization, energy efficiency measures, and beneficial electrification in public facilities across Alaska.

This project will improve conditions in 13 schools across 8 districts, in 8 different census areas:

1. Aleutians East Borough/ Sand Point K-12 School Major Maintenance

This project will include work items identified in 2017 condition survey including structural roof, wall, and foundation repairs, ADA compliance, replacement of mechanical ventilation and exhaust equipment, installation of missing electrical disconnect, and replacement of fire alarm system. It is worth noting that Sand Point excess power unit from the wind energy has now been installed.

2. Kuspuk/Johnnie John Sr. K-12 School Major Maintenance, Crooked Creek

Project is for retaining wall work, exterior wall repair, interior repair, remediation of mold, hazardous materials abatement, repair of exterior egress at doors, and major renovations to the HVAC and electrical systems.

3. Lower Kuskokwim/ Akula Elitnavik K-12 School Renovation, Kasigluk-Akula

These facilities have all been in service for about 35 years, and are reaching the end of their lifespans. Concerned, the district contracted with Nvision Architecture in June 2017 to perform a condition survey of the facility. The condition survey report identified a number of issues with these facilities in each discipline. Site work included repairs to stairs, play decks and walk ways, as well as playground equipment, fuel tanks, and removal of old water and sewage treatment equipment. Architectural items included interior repairs to floor structure, renovation of locker rooms, replacement of nonfunctioning bleachers, and finish upgrades. Mechanical work consisted of correcting the sewage lift pumps, replacement of a boiler and heating system upgrades, and new fire suppression in the kitchen. Electrical items included upgrading general and egress lighting, panel and outlet replacement, new security, fire alarm, and intercom systems, and upgraded to the data network.

4. Lower Yukon/ Kotlik and Pilot Station K-12 Schools Renewal and Repair

This project will replace worn out materials in these schools, including replacement of DDC head end equipment, and replacement of the building skirt in Kotlik. The old DDC mechanical controls used in the schools have had many issues through the years. Valves and other items in the system have failed. Although the district has repaired and replaced components along the way, the controls are simply not functioning as intended. These controls were also not equipped with the graphical interfaces and connectivity of more recent systems. This project would replace the head end equipment and any failed components, reprogram the controls, and re-commission the system to allow for more efficient and simplified operation with lower operating costs. The school was designed and constructed with the thought that it will continue to sink into the tundra over time, so a fabric skirting detail was designed to accommodate this change in elevation. However, the fabric material has failed over time, and is no longer providing the thermal and security protection that is required. Although district maintenance personnel have attempted to replace the fabric with plywood as a substitute, this has not worked as a long-term solution. A new skirting, designed to adjust with the building's elevation is required to protect this school building from frost heaves and freezing components such as the sewage lift station located beneath the building.

5. Northwest Arctic Borough/ Davis-Ramoth K-12 School Renovation

This project will renew essentially all mechanical, electrical and fire protection systems within the Davis-Ramoth K-12 School. Minor architectural system work is included. Scope of work will replace code and essential operating systems at the end of their useful lives, including life safety systems that have failed. The HVAC controls have already failed resulting in the heating operating wide open creating very excessive temperatures impacting student's ability to focus. This condition is wasting valuable money on fuel oil and associated electrical costs. The fire alarm system has been completely offline for months on end until a search of the entire United States found a usable motherboard to patch the system back into functioning on borrowed time. Currently, the instructional program is being impacted by aging building systems that are no longer functional or on the verge of failure, thus, that is now our focus for capital improvements.

6. Southeast Island/ Thorne Bay K-12 School Mechanical Control Upgrades

This project will replace the failing 25+ year old pneumatic HVAC controls at the school with a modern DDC control system for greater reliability and energy efficiency. The pneumatic control systems are 29 and 32 years old and have essentially failed at this point. They have in large part become just complicated on/off switches that now require manual control, and constant adjustment. This is having the effect of using far more energy than necessary to heat and ventilate the buildings, and makes the buildings uncomfortable for students and staff due to fluctuating temperatures. This also increases the amount of time and maintenance resources needed to keep things running and the environment comfortable. As described in the condition report, these controls are long outdated technology and no longer manufactured, which means that replacement parts are no longer available to restore the system to even its original limited functionality. Schmolk Mechanical has told the district that it would be cheaper to just replace the system than to attempt to get it back to proper function. The district now seeks to replace these controls with a far more capable, reliable, and efficient DDC system as recommended by the engineer. This system will allow maintenance staff to monitor both buildings from any location, get automated warnings of issues, and to have the system remotely monitored and diagnosed by offsite technicians. This will save the district in oil/wood and electric costs and maintenance time, while also making the buildings more comfortable for their users.

7. Southwest Region/ Twin Hills, Ekwok, and Aleknagik K-12 School Renovation

Work would be done to the exterior building envelope new metal roofing and added insulation, exterior doors and windows replaced. Interior upgrades will involve replacing doors and frames, paint of walls, ceiling tile, replacement and new flooring throughout. Mechanical upgrades will be made to the HVAC systems, new fire alarms system with retro fitted sprinkler system. New heating system including boilers and circulator pumps throughout the school would be replaced. These upgrades will extend this 40+ year building life for many more years.

8. Yupiit/ Mechanical System Improvements, 3 Schools

This project will update outdated HVAC DDC controllers at Akiak, Akiachak, and Tuluksak schools with new internet enabled controllers. The new DDC system will include a new server and program for the three schools and devices. The air handler system will be updated to MERV 13 filtration in the schools.

In summary, the proposed GHG reduction measures are aligned with current school capital improvement program priorities that will increase the resilience of facilities and the learning environment of students. This alignment means that in each case, high priority GHG reduction measures like replacing mechanical and electrical systems and completing building envelope improvements are consistent with broader needs identified by schools for community benefits.

Milestones include:

- 1. Energy audit and assessment** – Districts will conduct a comprehensive energy audit and assessment of the school facilities to identify areas with the greatest potential for energy savings and efficiency improvements. This milestone involves evaluating energy usage, conducting building inspections, and analyzing utility bills to establish a baseline for future comparisons.
- 2. Project design and planning** – Districts will have identified specific energy efficiency projects and initiatives based on the findings of the energy audit and assessment. Prioritize projects based on factors such as potential energy savings, cost-effectiveness, return on investment, and alignment with broader sustainability objectives.
- 3. Procurement and Vendor Selection** – Districts will procure necessary equipment, materials, and services for implementing GHG reduction measures. This milestone includes issuing requests for proposals (RFPs), evaluating bids, selecting qualified vendors or contractors, and negotiating contracts with clear terms and performance metrics.
- 4. Construction** – Districts will execute energy efficiency projects according to the established timeline and plan. This milestone involves coordinating construction activities, overseeing installations, conducting quality assurance checks, and ensuring compliance with relevant codes and regulations.
- 5. Monitoring and Performance Tracking** – Districts will implement systems for monitoring and tracking energy usage, savings, and performance of installed equipment and systems. This milestone includes installing energy meters, data loggers, or building management systems, analyzing consumption data, and identifying opportunities for optimization or adjustments.
- 6. Training and Education** – DEED will work with districts to provide training and education to school staff, students, and stakeholders on energy conservation practices, energy-efficient technologies, and the benefits of sustainability. This milestone involves organizing workshops, seminars, or outreach events to raise awareness and foster a culture of energy efficiency within the school community.

7. Evaluation and Continuous Improvement – DEED and districts will evaluate the effectiveness of energy efficiency measures on an ongoing basis and make adjustments as needed to optimize performance and achieve desired outcomes. This milestone includes conducting post-project evaluations, soliciting feedback from stakeholders, and incorporating lessons learned into future planning and decision-making processes.

Explain how these features, tasks, and milestones will ensure success of the measures.

The Alaska Department of Education and Early Development (DEED) manages state and federal funding for Alaska’s schools to ensure an excellent education for every student every day. The proposed measure would fund major maintenance projects with substantial emissions reduction potential that have been identified through the department’s Capital Improvement Project (CIP) program.

Describe underlying assumptions and risks associated with those features, tasks, and milestones.

Projects on the CIP major maintenance list represent the most important capital projects for schools across the state. Of particular priority are projects in disadvantaged communities in the state, found primarily in Rural Education Attainments Areas (REAAs) of the unorganized borough, where the State of Alaska assumes the responsibility for providing K-12 education that would normally be shared with local governments. These REAA school districts operate with their own administration and school boards. The logistical ability to implement these measures varies by location, but with DEED’s support the project can be successful within five years. Importantly, most of the projects that districts would consider for this program have been identified, scoped, and even partially designed/engineering as part of their submission to the state’s CIP process.

Discuss risks that could reasonably lead to delays or interruptions in the development or implementation of a GHG reduction measure or could impact its effectiveness.

DEED has identified the following risks that could lead to delays or interruptions in implementation of a GHG reduction measure, or which could impact its effectiveness.

Risk	Description	Potential (1-5/ Low to High)	Mitigation
Disruption to Operations	Implementing energy efficiency measures often requires retrofitting existing systems or modifying building structures, which can cause disruptions to normal school operations. Construction work, equipment installation, and system upgrades may necessitate temporary closures, relocation of classes, or adjustments to schedules.	2	Schools are experienced at completing upgrades and repairs around the school schedule, to maximize a safe and active learning environment.
Maintenance and Performance	Energy-efficient equipment and systems require regular maintenance to ensure optimal performance. Schools may face challenges in allocating resources for ongoing maintenance, leading to reduced efficiency over time or unexpected breakdowns.	3	While CPRG funds will initiate improvements, school districts will have to plan and budget for necessary maintenance to ensure optimal performance. DEED Facilities will offer TA.

Budgetary Stress	One of the primary barriers to implementing energy efficiency measures is the initial investment required. Schools may struggle to secure funding for upgrades or lack the budget flexibility to prioritize energy efficiency over other pressing needs.	1	CPRG funds overcomes this initial hurdle, and DEED will need authority in the legislative budget to accept these and utilize them for intended purposes.
Technical Complexity	Energy efficiency projects may involve complex technical solutions, such as HVAC upgrades, lighting retrofits, or building envelope improvements. Schools may lack the internal expertise to design, implement, and monitor these solutions effectively, increasing the risk of errors or suboptimal outcomes.	2	The partnership between DEED and districts, and available technical expertise at AHFC, should help overcome any risk related to technical complexity of installation and maintenance of upgrades.
Regulatory Compliance	Schools must adhere to various regulations and building codes when implementing energy efficiency measures. Failure to comply with these requirements can lead to fines, delays, or legal issues, especially if renovations or upgrades are not properly permitted or approved.	2	DEED is familiar with processes to ensure regulatory compliance, and will implement strong oversight measures as part of its sub-recipient management.

Discuss the extent to which GHG emission reductions may be affected by these risks.

Based on this analysis, DEED is highly confident in the ability of school districts to implement reduction measures effectively, and with little interruption.

Explanation of how each GHG reduction measure included in the application relates to a GHG reduction measure included in the relevant PCAP(s), why each measure was selected as a priority, and a description of how each measure will meet the goals of the CPRG program.

Alaska's PCAP identifies energy efficiency and weatherization of public facilities as reasonable and effective measures to reduce GHG emissions. These measures were selected as a priority due to the alignment they have with overall building improvements that lead to better learning environments, for schools in disadvantaged communities.

This project is consistent with the goals of the CPRG program:

1. Implement ambitious measures that will achieve significant cumulative GHG reductions by 2030 and beyond – DEED is confident in the measures resulting in significant cumulative GHG reductions, improving conditions in 14 communities.
2. Pursue measures that will achieve substantial community benefits (such as reduction of criteria air pollutants (CAPs) and hazardous air pollutants (HAPs)), particularly in low-income and disadvantaged communities – DEED selected these projects based on their location in low-income and disadvantaged communities, and which are aligned with community priorities to benefit students.
3. Complement other funding sources to maximize these GHG reductions and community benefits – These projects are submitted to DEED as part of the state's school construction and major maintenance program, with funding allocated each year to address priority needs. CPRG funding will leverage other state investments for broader impact.

4. Pursue innovative policies and programs that are replicable and can be “scaled up” across multiple jurisdictions – DEED anticipates greater capacity to support additional GHG reduction measures across the state’s school districts, and a learning process that can be shared across the state.

Demonstration of Funding Need

Demonstrate a strong need for CPRG implementation funding that is unmet by other funding sources.

Based on an [annual review](#) of the State’s contributions to school construction and major maintenance, DEED has determined that the State has only been able to fund 15.05% of need on average, annually, over the last 13 years. In that period, there have been four in which no funds were available for major maintenance, and one year without construction funding.

At the same time, school districts are facing deficits across the state; operations and maintenance budgets that are 15% of district spending on average are facing additional scrutiny. Districts are unable to meet current needs, let alone make improvements that lead to emissions reduction.

Explain if and how they have explored the availability of other federal and state grants, tax incentives, and other funding sources to implement their GHG reduction measures and why these sources are not sufficient.

Acknowledging that State funds are unlikely, DEED is exploring the availability of other federal funds to implement GHG reduction measures. DEED is familiar with and evaluating:

- DOE’s Renew America’s Schools - <https://www.energy.gov/scep/renew-americas-schools> - is a competitive program.
- Investment Tax Credits are not directly available, but savings by contractors could be passed onto schools - <https://www.energy.gov/eere/buildings/179d-commercial-buildings-energy-efficiency-tax-deduction>
- The Inflation Reduction Act’s Clean Heavy Duty Vehicles program (section 60101) is available for lower emission school buses.
- USDA’s Community Facilities Programs - <https://www.rd.usda.gov/programs-services/community-facilities> - can finance school construction and rehabilitation.
- The [IRA Environmental and Climate Justice Program](#) provides \$3 billion to carry out environmental and climate justice activities to benefit underserved and overburdened communities. Schools are eligible entities for the program and can use the funding for facility improvements like HVAC upgrades.

The scale of need in rural, disadvantaged school districts means that it will take CPRG and many other resources to meet the needs in Alaska.

Include a list of federal and non-federal funding sources (e.g., EPA’s GHG Reduction Fund Solar for All program) that the applicant has applied for, secured, and/or will secure to implement the GHG reduction measures, if applicable.

Alaska state agencies have actively pursued federal funding opportunities, including:

- Alaska Energy Authority (AEA) application to EPA Solar for All included a partnership with Alaska Housing Finance Corporation (AHFC) – this would focus on community scale improvements as well as residential.
- Only one school district was successful applying for DOE’s Renew America’s Schools, in Alaska, but this remains a potential in the future.

- The Alaska Municipal League (AML) recently applied for EPA’s Indoor Air Quality in Schools program, which would lead to increased capacity building activities.

Transformative Impact

Describe the extent to which the proposed GHG reduction measures have the potential to create transformative opportunities or impacts that can lead to significant additional GHG emissions reductions.

By investing in energy-efficient technologies and practices, schools can serve as catalysts for broader sustainability initiatives, driving systemic change and inspiring communities to adopt similar measures. These upgrades not only directly reduce the carbon footprint of school facilities but also create ripple effects throughout the community. For example, by retrofitting lighting systems with energy-efficient LEDs, schools not only lower electricity usage but also demonstrate the feasibility and benefits of such upgrades to students, staff, and parents. This educational component can lead to increased awareness and adoption of energy-saving behaviors both within and beyond the school environment, resulting in further emissions reductions. Additionally, energy efficiency upgrades often involve the integration of renewable energy sources, such as solar panels or wind turbines, which further decrease reliance on fossil fuels and contribute to a cleaner, more sustainable energy mix. Furthermore, by investing in modern, efficient building systems and technologies, schools can future-proof their facilities against rising energy costs and increasingly stringent environmental regulations, ensuring long-term sustainability and resilience. Ultimately, energy efficiency upgrades in schools have the potential to not only reduce GHG emissions directly but also to inspire broader societal change, fostering a culture of sustainability and environmental stewardship for generations to come.

Section 2: Impact of GHG Reduction Measures

Magnitude of GHG Reductions from 2025 through 2030

Describe the magnitude of cumulative GHG emission reductions and the durability of the reductions that will be achieved through implementation of each GHG reduction measure for the period 2025 through 2030.

See table below (column 3) for cumulative magnitude, in metric tons, and language below for durability.

Action	Estimated Emissions Reduction (Annual)	Emissions Reduction (Cumulative, through 2030)	Year online
All sites, realistic baseline	819 MT CO2e	3,549 MT CO2e	2027-2029
All sites, audit-discovery	1,784 MT CO2e	5,333 MT CO2e	2027-2029
Total	2,602 MT CO2e	8,882 MT CO2e	

Using the modelled emissions reductions explained in the technical appendix and detailed in the calculation sheet, the table above provides the cumulative emissions reductions in MT (metric tons) for “realistic baseline” improvements, which can be assumed for each project as well as “audit-discovery” that approximates the potential improvements that may result as part of the audit in each facility. These calculations presume that improvements are commissioned in a linear manner, beginning with a portion of projects fully online for calendar year 2027 and all projects completed by 2029.

For each GHG reduction measure, applicants should provide estimated metric tons of CO₂-equivalent emission reductions resulting from the measure.

See table below (column 2) for annual metric tons of CO₂-equivalent emission reductions.

Action	Estimated Emissions Reduction (Annual)	Year online
All sites, realistic baseline	819 MT CO ₂ e	2027-2029
All sites, audit-discovery	1,784 MT CO ₂ e	2027-2029
Total	2,602 MT CO₂e	

Provide the sum total of GHG reductions resulting from all measures in the application.

See table below (bottom row) for the sum total of actions resulting in GHG reductions, annually and through 2030.

Action	Estimated Emissions Reduction (Annual)	Emissions Reduction (Cumulative, through 2030)
Total	2,602 MT CO₂e	8,882 MT CO₂e

In describing the durability of the GHG emission reductions, applicants should discuss the extent to which the measures will result in a permanent reduction in cumulative GHG emissions.

While this project's improvements can lead to significant and long-lasting emissions reductions, DEED recognizes that they may not be entirely permanent or static. Continued monitoring, maintenance, and proactive management are necessary to preserve and maximize the benefits of energy efficiency initiatives over the long term. Additionally, schools should view energy efficiency as part of a broader sustainability strategy, incorporating ongoing efforts to reduce environmental impact and promote resilience in the face of future challenges. This project's activities will include new equipment installations that have a longer lifespan than traditional materials. DEED will encourage regular maintenance and proper operation of energy-efficient equipment, which are essential for ensuring optimal performance and longevity. Changes in energy usage patterns, such as increased occupancy, expanded facilities, or shifts in operational practices, can affect the sustainability of emissions reductions over time. Technological advancements and innovations in energy efficiency may offer opportunities for further improvements or upgrades in the future. Schools can ensure longer lasting benefits by encouraging energy-saving behaviors, promoting awareness, and providing ongoing education and training that can help sustain the positive impact of energy efficiency initiatives. DEED has less control over external factors, such as changes in energy prices, regulatory requirements, or environmental policies that may influence the effectiveness and durability of emissions reductions achieved through energy efficiency improvements. However, this project's measures will strengthen the capacity of school districts and the base from which future improvements may be made.

Magnitude of GHG Reductions from 2025 through 2050

Applications should describe the magnitude of cumulative GHG emission reductions and the durability of the reductions that will be achieved through implementation of each GHG reduction measures for the period 2025 through 2050.

Action	Estimated Emissions Reduction (Annual)	Emissions Reduction (Cumulative, through 2050)	Year online
All sites, realistic baseline	819 MT CO ₂ e	19,925 MT CO ₂ e	2027-2029
All sites, audit-discovery	1,784 MT CO ₂ e	41,005 MT CO ₂ e	2027-2029
Total	2,602 MT CO₂e	60,930 MT CO₂e	

Using the modelled emissions reductions explained in the technical appendix and detailed in the calculation sheet, the table above provides the cumulative emissions reductions in MT (metric tons) for “realistic baseline” improvements, which can be assumed for each project as well as “audit-discovery” that approximates the potential improvements that may result as part of the audit in each facility. These calculations presume that improvements are commissioned in a linear manner, beginning with a portion of projects fully online for calendar year 2027 and all projects completed by 2029.

For each GHG reduction measure, applicants should provide estimated metric tons of CO₂-equivalent emission reductions resulting from the measure.

See table below, second column.

Action	Estimated Emissions Reduction (Annual)	Emissions Reduction (Cumulative, through 2050)	Year online
All sites, realistic baseline	819 MT CO ₂ e	19,925 MT CO ₂ e	2027-2029
All sites, audit-discovery	1,784 MT CO ₂ e	41,005 MT CO ₂ e	2027-2029
Total	2,602 MT CO₂e	60,930 MT CO₂e	

Provide the sum total of GHG reductions resulting from all measures in the application.

See table below, bottom row.

Action	Estimated Emissions Reduction (Annual)	Emissions Reduction (Cumulative, through 2050)	Year online
All sites, realistic baseline	819 MT CO ₂ e	19,925 MT CO ₂ e	2027-2029
All sites, audit-discovery	1,784 MT CO ₂ e	41,005 MT CO ₂ e	2027-2029
Total	2,602 MT CO₂e	60,930 MT CO₂e	

Cost Effectiveness of GHG Reductions

Information demonstrating the cost effectiveness of the GHG reductions anticipated from the measures included in the application.

\$/MTCO₂e for energy efficiency projects is high, thanks to the high logistical costs associated with rural Alaska. The CIP evaluation process which selected these projects does consider construction costs as part of its review, balancing benefits and cost effectiveness in terms of school district need.

Calculation of the requested CPRG implementation grant dollars divided by the quantified GHG emission reductions for the period 2025-2030 calculated to meet criterion 2.a for the set of measures included in the application.

Action	Emissions Reduction (Cumulative, through 2030)
All sites, realistic baseline	3,549 MT CO ₂ e
All sites, audit-discovery	5,333 MT CO ₂ e
Total	8,882 MT CO₂e

Total Budget	\$48,920,022.87
\$/MTCO₂e through 2030	\$5,507.53

Based on the estimated cumulative reduction through 2030, and including all budget categories, this project reduces emissions at a cost of approximately \$5,507.53 /MTCO₂e.

Qualitative narrative explaining any factors that affect the measures' cost-effectiveness

[Alaska's cost of living has always been higher](#) than in the continental U.S. states. Data collected and tracked by the Council for Community & Economic Research (C2ER) shows that Alaska's costs are always above the national average. For the four Alaska cities tracked, the cost of groceries and healthcare are consistently higher than other parts of the country, with two cities having consistently higher housing and utility costs as well. In 2023, Alaska ranked 4th in the state for the cost of health care premiums, according to the Alaska Department of Labor & Workforce Development.

Alaska's high costs are attributable to its geography and population. The state is nearly 600,000 square miles, or almost twenty percent of the combined land mass of the other 49 states. The population of Alaska in the 2020 Census was 733,391 – smaller than all but two other states. According to the Alaska Department of Transportation & Public Facilities, 82% of Alaska's communities are not accessible by road. Anchorage, the state's main market and distribution center, is more than 2,400 road miles from Seattle. Transportation for goods, services, and people is expensive, time-consuming, and often hindered by bad weather.

[Energy costs are also higher in Alaska.](#) Transmission between most communities is not possible due to long distances. Electricity is generated in rural communities by burning diesel fuel, which must be transported. The cost of electricity can be three to five times higher for rural consumers than for customers in more urban parts of Alaska, according to the Alaska Energy Authority.

The harsh weather conditions make building and maintaining all types of infrastructure more expensive and complicated in Alaska than the rest of the country. Construction standards must account for climates that can have 150° F differences in temperature between summer and winter.

Building new infrastructure and performing maintenance can happen only in the short summer construction season.

Everything costs more in rural Alaska, and shipping plays a primary role in those higher costs. [Transportation costs](#) increase with the distance from hub communities, leading to huge differences in cost between Alaska's rural and urban areas. Prices are lower on the road system and in areas with year-round barge access (Southeast and Gulf Coast) and highest in places with small populations where goods must be barged longer distances (often up long rivers) or flown in.

Documentation of GHG Reduction Assumptions

For each GHG reduction measure, applications should demonstrate the quality, thoroughness, reasonableness, and comprehensiveness of the methodology, assumptions, and calculations described for developing the estimated GHG emission reductions. The application should document the method for estimating GHG emission reductions, including the basis for emission scenarios, relevant assumptions, and models or methods used and any uncertainties in these calculations.

The project scope school district facility models are constructed in EnergyPlus, the industry standard building energy simulation tool, using the automatic generation capability of the Constellation Navigator software. Because only the 5 main variables were available, all other energy-relevant building data was taken from the most applicable of the approximately 1,000 representative building energy models developed by NREL, PNNL, and DoE. The most applicable data source for each building was determined by comparing the year of construction, zip code, building type, and heating fuel (as assumed from other fuels in the building).

It is planned to calibrate the reference case to measured historical utility fuel delivery quantities at the state level. This was accomplished by joining the ARIS buildings with the AK PARCEL AND LOT set to ensure all commercial buildings in the state are represented. This step ensures that models at the building level are not over- or under-estimating any fuel usage, and it also helps us refine the assumptions made for heating fuel at the building level.

The difference between the reference (base) case and the modeled changes in energy due to the modeled adoption of measures discussed above, is the activity data being used to estimate the reduction in GHG. For example, after buildings are simulated using the tools and assumptions above, the estimated reduction or increase in different types of fuels, such as natural gas, coal, liquid fuels or electricity, is converted from MMBTU or its energy equivalents, into MT CO₂e using the corresponding emission factors for that fuel type, across the constituent CO₂, CH₄ and N₂O. Next, EPA's 2022 GWP values are used to convert to each MT per GHG type into aggregated annual MT CO₂e – using 1 for CO₂, 298 for N₂O and 25 for CH₄. Whenever appropriate, the emission factors of electricity are matched using the community the buildings are in, and either the PCE based emission factors, or the grid-rates for the sub-region.

All applicants should provide measure-specific assumptions and data elements needed to calculate GHG emission reductions. The rigor of the methodology and assumptions used in GHG emission reduction calculations should be commensurate with the level of funding requested in the application.

To inform modeling, DEED has provided the following measure-specific data elements:

- As part of the DEED facilities database and contact Rolodex – year of construction, ZIP, square footage, building type
- As part of the CIP applications – heating source, nature of project, other facility details

In order to model the varying scope of projects included in this application, top-level project descriptions were mapped to a set of standard improvements modeled for each facility that meet various ASHRAE standards as described in the technical appendix.

The quantification does not assume any impacts of “joint strategies” – that is, the simultaneous impact of multiple projects at a single location. In other words, if a project analyzes the reduction of grid emissions based on upstream integration of renewable energy, the new emission factors of electricity are not being used to measure the impact of electrification or efficiency of end-use equipment, as stated above. Instead, the reference emission factors will be used. Similarly, if competing efficiency projects are modeled such that they are not additive, but are substitutes of each other, the extent of overlap is not being modeled or predicted. Additionally, the baseline models assume annualized load profiles – and actual building performance may differ, such as from partial usage or occupancy, etc. Lastly, there are no weather normalizations done on either the activity of the reference scenario or modeled measures.

Additional information on methodology and assumptions is available in the attached technical appendix.

Section 3: Environmental Results – Outputs, Outcomes, and Performance Measures

Expected Outputs and Outcomes

Applicants should identify the expected outputs and outcomes (see Section I.C) for each GHG reduction measure. Specific outputs and outcomes should be provided and may include short- and longer-term activities.

DEED expects and will monitor the following outputs and outcomes.

Output:

- 8 school districts receive funding to make energy efficiency and energy-related improvements that are consistent with measures proposed to reduce GHG emissions.
- 13 schools located in rural, disadvantaged communities make improvements that are anticipated to result in reduced GHG emissions.
- Reduced energy consumption - this reduction can be measured in terms of kilowatt-hours (kWh) of electricity, therms of natural gas, gallons of heating oil, or other relevant units, depending on the specific measures implemented by the school district.
- Cost savings - lower energy consumption leads to reduced utility bills, resulting in cost savings for the school district. These savings can be significant over time and can be reinvested in educational programs, facility improvements, or additional sustainability initiatives.

Outcomes:

- Reduction in cumulative metric tons of GHG emissions from 2025 through 2030:
- Reduction in cumulative metric tons of GHG emissions from 2025 through 2050:
- GHG reduction measures in annual amount of CAP and/or HAP emissions in 2030:
- Reduction in annual amount of CAP and/or HAP emissions in low- income and disadvantaged communities in 2030.
- Improved indoor air quality from 2025 through 2030 – school districts report baseline and improved air quality.
- Enhanced resilience and reliability from 2025 through 2030 – school districts report fewer disruptions to operations.

- DEED’s capacity to provide technical assistance and support school district GHG emissions reductions is improved.

Performance Measures and Plan

Describe the proposed performance measures that will be the mechanism to track, measure, and report progress toward achieving the expected outputs and outcomes for each GHG reduction measure.

DEED will utilize the following measures to track program progress toward outputs and outcomes.

- **Capacity Increase Metrics:** Quantify short- and long-term school district capacity increases. Collect data on the nature of capacity development (e.g., training programs, hiring initiatives) and assess the impact on districts and local governments.
- **Stakeholder Participation Metrics:** Establish benchmarks for sustained participation of historically excluded stakeholders, including metrics on the frequency and depth of their involvement in planning and decision-making processes.
- **Impact Metric Development:** Collaborative work with school districts to establish and regularly update community-defined impact metrics, relative to local values and goals.
- **Positive Benefits Metrics:** Quantify and qualify positive benefits specifically for disadvantaged communities. Factors of consideration will include attendance, health, and education attainment.
- **Committee Effectiveness Metrics:** Evaluate the establishment and effectiveness of public advisory committees by measuring their influence on decision-making, the diversity of representation, and the extent to which community input is incorporated.
- **Quality of Documentation:** Assess the quality of documentation by examining factors such as completeness, accuracy, and timeliness. Ensure that documentation effectively communicates progress toward achieving expected results.
- **Effectiveness of Web-Based Assets:** Evaluate the usage and impact of web-based assets, considering factors such as user engagement, accessibility, and the ability of online forms and datasets to convey meaningful information.

Describe their plan for tracking and measuring progress toward achieving the expected outputs and outcomes established in Section 3.a of the workplan.

DEED will participate in a coordinated approach led by the Alaska Municipal League (AML) as an extension of its current support to the Alaska Dept. of Environmental Conservation, which is administering the CPRG program. AML will work with DEC to establish a statewide tracking and reporting system for CPRG awardees to utilize. This system will include consistent timelines for reporting, methodology that is consistent with the State’s GHG emissions inventory, and a dashboard that provides reporting individually and cumulatively. This State-led effort not only complements EPA’s own activities but ensures a platform for long-term accountability and progress.

While targeted to meet the needs of CPRG and Tribal CPRG implementation awardees, the ability to report progress will be available to any state agency, or local or Tribal government, as aligned with measures described in Alaska’s Priority (and eventually Comprehensive) Action Plan.

AML will work with DEC and awardees to establish a consistent and simplified reporting structure, which will be completed through an online portal that leads to progress demonstrated via a

publicly available dashboard. Reporting will be based on the outputs and outcomes identified in each awardee's implementation plan, and built to include both unique measures and those that are similar across projects.

DEED expects a robust subrecipient monitoring process that will require each school district to complete timely reporting, with technical assistance provided by DEED Facilities staff or partners. School districts will implement a system of monitoring that is initiated through a baseline assessment that vets and downscales broadly available data, after which quarterly (depending on grant award terms) data is included and submitted for review and analysis.

DEED will leverage the statewide reporting and monitoring effort led by DEC, through AML, such that subrecipient engagement is managed through a single entity across awards. This dedicated position will ensure consistency of data collection and alleviate any staff burden at DEED. Ultimately, this process will mean that DEED and school district staff can focus on project and measure implementation, while support for monitoring is provided by a third party who then has the technical capacity and expertise to augment this line of effort.

Explain how the results of each GHG reduction measure will be evaluated, including details on the approach to quantify and disclose the actual GHG emission reductions and associated CAP and HAP changes accomplished by each GHG measure.

If awarded, DEED will work with AML to complete more detailed emissions reduction estimates for each project included in this application. Based on these project-level estimates and working with school district staff, DEED will verify the effectiveness of measures in energy use and emissions reduction once projects have been completed and documentation of this reduction will be disclosed via the aforementioned reporting structure. In order to quantify and disclose reduction in criteria and hazardous air pollutants, DEED and AML will employ emissions factor-based measurements and CAP remote sensing tools being deployed as part of the CCAP being developed by DEC.

Authorities, Implementation Timeline, and Milestones

Describe the parties responsible for implementing each GHG reduction measure, including roles and responsibilities for each party, including sub-awardees (including other members of a coalition), contractors, and other entities, whose cooperation is necessary for success of the measures.

DEED is the prime applicant and will manage the overall program for successful implementation, mainly acting as a steward of funds that will be subawarded to school districts. DEED will maintain reporting responsibilities, and overall financial management consistent with 2 CFR 200.

School districts will be responsible for actually implementing each GHG reduction measure, which are based on projects already submitted to DEED as part of the district's capital improvement plan. District and school facilities staff will manage physical upgrades and improvements, including to ensure contractor performance.

DEED's operating practice ensures compliance. Once there is approval for a grant subaward, a project number is assigned by the department, and a draft project agreement is provided for review. The project agreement transfers the responsibility for execution of the project from DEED to the school district (or municipality) and establishes the terms and conditions by which the project will be executed. The draft agreement contains standard clauses and appendices. Appendices relating to project scope, conditions, budget, and submittals are based on the project application and incorporate any modifications made by DEED. The project agreement

should be reviewed for accuracy and applicability. Once there is consensus, the agreement is finalized and signed.

All open projects are required to submit an annual report that provides a financial and narrative update of the project. The report provides an opportunity to document the progress of a project, to ensure submittals are up-to-date, and to review whether a budget amendment may be needed. Late annual reports may cause payments to be suspended.

DEED will participate – and encourage that of subawardees – in a statewide cohort of awardees, led by AML through DEC’s CPRG planning and sustainability plan. Essentially, implementation plan awardees can choose to participate in quarterly calls where lessons learned are shared, challenges identified, and best practices introduced. This cohort approach will also identify additional partners that can complement implementation, including the Alaska Energy Authority (AEA) and the Alaska Housing Finance Corporation (AHFC), and the University of Alaska.

Which party or parties have the authority to carry out each proposed measure or, in the case where they do not currently have authority, provide a clear plan and timeline to obtain it during the grant period.

DEED maintains a number of programs relating to the financing of school construction and maintenance, both for the REAA school districts established by AS 14.08.031(a) which receive most of their revenue from the department, and for municipal school districts. The major maintenance program referenced in this plan was established by AS Chapter 14.11. DEED provides school construction and major maintenance standards that should be followed at the district level, but districts maintain a high level of autonomy over individual decisions.

School districts in Alaska are divided into municipal school districts (with facilities owned and maintained by a local government, in most cases) and Regional Education Attainment Areas (REAAs). In both cases the school district has facilities staff who are responsible for building improvements. In the case of municipal school districts, project development and implementation may be accomplished collaboratively. In all cases, as political subdivisions of the state, the school district and/or local government have the authority to implement, and that decision-making authority is independent of DEED.

All other entities whose cooperation or participation is necessary for GHG reduction measure implementation.

DEED will collaborate with the AML, a statewide nonprofit dedicated to strengthening local governments, but whose services have been extended to meet the needs of both state agencies and Tribes. This broader effort is focused on ensuring that Alaska can make the most of federal infrastructure investments, including through CPRG. AML’s role will continue to be as a convener and facilitator of information sharing, and working with all partners to help deliver community benefits and overcome barriers to implementation. AML is an eligible subrecipient, with strong governance and financial management systems in place.

Detailed implementation timeline for each GHG reduction measure included in the application.

WORKPLAN: INCREASING RESILIENCE OF RURAL, DISADVANTAGED SCHOOL DISTRICTS IN ALASKA

Project Schedule		Year 1				Year 2				Year 3				Year 4				Year 5			
	Activity/Milestone	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Subrecipient Management																				
1.1	Subrecipient agreements between DEED and Districts																				
1.2	Recipient/subrecipient meetings																				
M1	Active subrecipient engagement documented																				
2	Stakeholder Engagement and Cohorts																				
2.1	School facilities manager and statewide cohort calls																				
2.2	Schools baseline/improvement survey																				
2.3	Best practices shared email communication																				
2.4	Online trainings for small groups																				
M2	Project informed by local stakeholders																				
3	Project Deployment																				
3.1	Planning and Feasibility																				
3.2	Environmental																				
3.3	Procurement																				
3.4	Permitting																				
3.5	Construction																				
3.6	Evaluation																				
M3	Audit, planning, procurements, construction																				
4	Monitoring Reductions																				
4.1	Dashboard development and data integration																				
4.2	Air quality sensors deployed																				
4.3	Data analysis and utilization																				
M4	Engagement in monitoring network																				
5	Reporting																				
5.1	Quarterly Evaluation of Performance																				
5.2	Annual Report on Outputs and Outcomes																				
5.3	Final Project Evaluation and Scalability																				
M5	Annual and Final Reporting Compliance																				

Section 4: Low-Income and Disadvantaged Communities

Community Benefits

Discuss and quantify, where possible, direct and indirect benefits and potential disbenefits to low-income and disadvantaged communities from the proposed GHG reduction measures

Among the benefits when addressing proposed GHG reduction measures for the Denali Borough is the prospect of Increased job opportunities to increase local capacity and strengthen the community overall.

The State of Alaska's Priority Sustainable Energy Action Plan shows that GHG reduction measures in Alaska have the ability to result in increased investment in the workforce in Alaska's LIDAC communities. Measures could result in job creation and business development, and sponsors may work individually and together to identify ways in which this can be maximized, not just in project development and delivery, but in the long term. This includes local hiring goals and cross-promoting hire between projects that occur within a region.

The Department of Environmental Conservation (DEC) anticipates that there will be opportunities or community strategies to be established as a direct result of projects. Agencies will be encouraged to reference DOE's Community Benefit Agreement Toolkit (CBA). The outcome of the CBA will be 40% of benefits allocated to communities of color, indigenous peoples, low-income communities, and other marginalized groups.

Thoroughly describe any anticipated negative impacts to low-income and disadvantaged communities and concrete strategies for mitigating those risks.

DEED does not anticipate any negative impacts of this project. Increased awareness of GHG emissions may result in increased awareness of gaps or school challenges, and the corresponding need for resources, which may not be readily available. DEED will pay particular attention to the potential for needs identification by districts outside the scope of this implementation project, and develop a strategic plan to ensure equitable outcomes for all, over time.

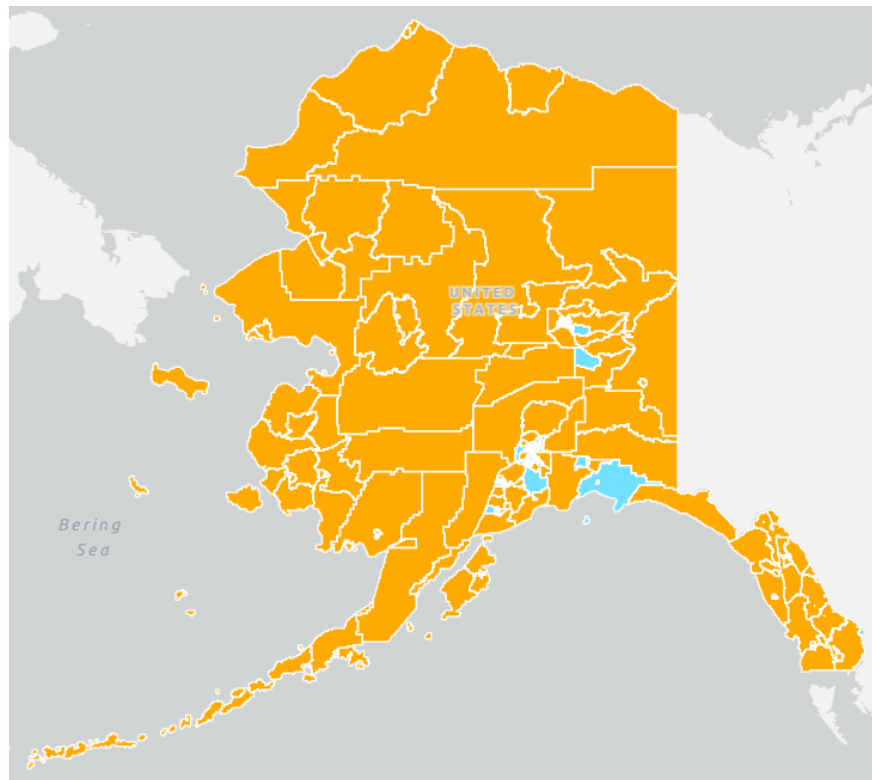


FIGURE 1: EPA IRA Disadvantaged Communities (CEJST and EJScreen)

List CEJST Census tract IDs or EPAs EJScreen Census block group IDs for areas that may be affected by GHG reduction measures.

In addition to the status within CEJST, all should be considered to be located within or adjacent to Tribal lands, with Alaska Native Village Statistical Areas in each community. Each community has a number of variables that contribute to their disadvantaged status, within EJScreen:

- One has a 100 as a percentile for toxic releases to air supplemental index.
- All are above 50 for percentile for lead paint supplemental index.
- One community has a 94 as a percentile for RMP facility proximity supplemental index.

Community	Census Tract ID	CEJST Disadvantaged
Selawik	2188000100	Yes
Thorne Bay	2198000100	Yes
Akiachak	2050000100	Yes
Akiak	2050000100	Yes
Aleknagik	2070000100	Yes
Crooked Creek	2050000300	Yes
Ekwok	2070000100	Yes
Kasigluk	2050000100	Yes
Kotlik	2270000100	Yes
Pilot Station	2270000100	Yes
Sand Point	2013000100	Yes
Tuluksak	2050000100	Yes
Twin Hills	2070000100	Yes

Describe plan and process for continuing to assess, quantify and report a more thorough quantitative analysis of associated community benefits, including co-pollutant (CAP and HAP) emission reductions.

DEED will work closely with Alaska DEC as part of its comprehensive planning process for CPRG, and participate in data acquisition and sharing throughout the four year timespan that includes DEC's monitoring and reporting. DEC is committed to sustaining these efforts, which means that its GHG Emissions Inventory will continue to serve as a base for data management and visualization. DEED will contribute to this process for downscaled data that is consistent with DEC's methodology for collection and sharing.

High-quality workforce development activities tied to a proposed measure that benefit individuals in low-income and disadvantaged communities. Workforce development can be a community benefit through its creation of equitable career pathways and training opportunities.

DEED will participate in the statewide workforce development activities organized by AML for applicants to CPRG implementation grants. This program provides a pathway for DEED – and school districts – to leverage existing but coordinated recruitment and retention resources, as well as skills development. Funding will be available to school districts to provide opportunities for:

- **Recruitment** – AML's partnership with the Associated General Contractors includes the ability for projects to participate in AGC's We Build Alaska public outreach campaign, which has the ability to geofence social media messaging.
- **Skills Development** – AML works with the Alaska Safety Alliance, Alaska Works Partnership, University of Alaska, and Alaska AFL-CIO to identify appropriate workforce training opportunities. As school districts identify workforce needs, including the need for reskilling, they can access any of these partnerships.
- **Career Navigation** – AML will coordinate with DOL&WD for access to Alaska Job Centers, as well as through AFL-CIO and other programs, to support project workforce career navigation, including pathways for certification, apprenticeship, and degree programs.

- **Wraparound Services** – AML works closely with multiple partners who have mechanisms in place to facilitate child care, housing, and housing stipends for staff and contractors, especially in conjunction with infrastructure investments across Alaska.

Community Engagement

Explain how input from low-income and disadvantaged communities was incorporated into the application.

Projects identified by DEED were submitted by school districts in rural and disadvantaged communities across Alaska. These projects have been vetted at the local level and reflect the needs identified through local processes that often include student, parent, and community input. In many cases, site councils (comprised of parents and community members) identify school facility needs. At the same time, school facilities maintenance and operations staff are embedded in these communities, and priorities identified and elevated from the bottom up.

These projects represent a concerted effort to address the diverse needs of communities, particularly those situated in rural and disadvantaged areas within the designated region. Through existing collaboration with various community organizations, the coordinating entity has a comprehensive understanding of local needs was attained, laying the foundation for targeted interventions. The vetting processes at the local level served as a crucial mechanism to ensure alignment between proposed projects and the actual needs identified through community-driven procedures. Input from stakeholders spanning residents, community leaders, and local organizations enriched the decision-making process, reflecting a commitment to inclusive governance. By engaging community members and relevant personnel, the priorities identified underscore the participatory nature of the initiative and its responsiveness to local dynamics.

This collaborative approach not only ensured the relevance and efficacy of the selected projects but also empowered districts to take charge of their development trajectories. Through ongoing dialogue and consultation, DEED was able to tailor interventions to address both immediate challenges and long-term aspirations. By recognizing the expertise and insights of local actors, the project implementation process went beyond traditional top-down approaches, fostering resilience and adaptability in the face of evolving needs and circumstances. In essence, the collaborative efforts between the implementing entity and community stakeholders signify a paradigm shift towards more inclusive and effective models of development, wherein local voices are not only heard but also integral to shaping positive change.

Describe how meaningful engagement with low-income and disadvantaged communities will be continuously included in the implementation of the GHG reduction measures.

DEED believes that meaningful engagement with low-income and disadvantaged communities is essential for ensuring equity and inclusivity in the implementation of greenhouse gas (GHG) reduction measures by school districts. A good approach involves establishing transparent and participatory processes that prioritize community input, collaboration, and empowerment. This can include holding regular meetings, workshops, or focus groups to solicit feedback, concerns, and ideas from community members. Additionally, school districts should actively seek out representatives from diverse socioeconomic backgrounds to serve on advisory boards or task forces dedicated to sustainability initiatives, ensuring that the voices of marginalized communities are heard and respected. Furthermore, efforts should be made to provide accessible information and resources in multiple languages and formats, making it easier for all residents to engage in the decision-making process. Schools can also partner with local community organizations,

faith-based groups, and grassroots initiatives to leverage existing networks and expertise, fostering trust and building capacity within underserved communities.

DEED will participate in DEC's development of Alaska's Comprehensive Climate Action Plan (CCAP), including currently planned activities.

- **CCAP Strategic Planning Meetings** - At the Infrastructure Development Symposium in April 2024, a half or full-day discussion will review the PSEAP and discuss the comprehensive planning process to get stakeholder buy-in and help inform the process going forward. The audience will at a minimum include representative state, municipal, and tribal government leaders. Following this and as early as late 2024, there will be regular stakeholder check-in meetings to review progress on the CSEAP with these leaders.
- **CCAP Emissions Sector Workshops** - From August 2024 to May 2025, AML, DEC, and relevant partners will organize charette style workshops that bring together interested stakeholders to produce workshop reports that will form the basis of the CSEAP. Informed by map tool resources produced as a continuation of GHG Inventory work with Constellation, and with technical expertise from partners, these workshops will look more deeply at potential for emissions reduction in each sector.

Current plans call for sector workshops addressing emissions reduction and co-benefits in the following emissions sectors: residential, non-residential, agriculture/land management, solid waste, wastewater, rural energy, Railbelt energy, industrial, land & air transportation, maritime, and carbon capture, use, and sequestration. As an outcome of the workshops, the planning team will identify interested participants for sector-level working groups that include relevant stakeholders and will help inform further development of the CCAP. Throughout sector workshops, there will be complimentary work with workforce contractors to support the workforce planning analysis.

Applicants should specify how they plan to ensure early and consistent inclusion of various linguistic, cultural, institutional, geographic, and other perspectives throughout project development and implementation.

School districts are actively engaged with distinct perspectives, specific to the community they serve, including locally elected and representative school boards that oversee resource allocation and school facility improvements. DEED will conduct a training for facilities staff and project managers to reference and build into project development and implementation the need for and methods by which districts can include linguistic, cultural, institutional, geographic, and other perspectives.

Section 5: Job Quality

Describe concrete, specific strategies to ensure CPRG implementation grant funds and the implementation of the GHG reduction measures generate high-quality jobs with a diverse, highly skilled workforce and support “high road” labor practices.

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).

It is also expected that DEED 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. These programs will identify and provide continuing education programs for employees to earn credentials and degrees relevant to their career pathways.

As a resource, the DEED will refer to overall PCAP related to Workforce, which includes the State's strategy to strengthen and cultivate a workforce capable of implementing the array of GHG reduction measures outlined within the plan to include the following:

1. Establish and cultivate increased coordinative capacity within and between the workforce and relevant sectors. This implementation strategy will support career pathways through a diverse network of training providers.
2. Expand outreach efforts to underserved and disadvantaged areas with high unemployment and underemployment. This implementation strategy will provide funding for statewide and targeted outreach efforts.
3. Increase capacity of existing place-based training programs for upskilling and reskilling Alaskans for employment in high-demand industries, implemented by prioritized region. Alaska has numerous existing training programs and facilities that have the potential to meet the training needs of Alaskans but lack the capacity to meet the demand.
4. Identify and deliver new or improved rural place-based training to underserved areas for upskilling and reskilling Alaskans for employment in high-demand industries, implemented by prioritized region and sector. This implementation strategy will focus on adding new place-based training and support systems to prioritized regions, including delivering remote training as necessary.
5. Provide wraparound support services. Implementation efforts should provide support for workers entering into training programs, including housing and childcare, travel, and supplies that alleviate the challenges identified by worker voices.
6. Strengthen economic development and the contractor ecosystem. This implementation strategy will include maintaining and cultivating partnerships with Alaska SBDC and regional development organizations (ARDORs).

Implementing projects that contribute to reducing GHG emissions will take into account Good Jobs Principles. Alaska is committed to fostering safe, healthy, and inclusive workplaces with equal opportunity, free from harassment and discrimination. State agencies and local governments will provide multiple pathways for creating high-quality, middle-class jobs in the residential-serving distributed solar energy industry based on principles outlined below. In addition, eligible entities have considered ways to invest in training, education, and skill development and support the corresponding mobility of workers to advance in their careers. DEED will assess collective bargaining agreements as identified throughout the life of the project.

Section 6: Programmatic Capability and Past Performance

Past Performance

Submit a list of up to five federally funded or non-federally funded assistance agreements that the applicant is performing or has performed within the last three years.

1. Comprehensive Literacy State Development Grant

- CFDA Number 84.371C FAIN: S371C190025
- US Department of Education
- Point of Contact: Jennifer Brianas, Education Program Contact, jennifer.brianas@ed.gov
- The purpose of the CLSD discretionary grants is to create a comprehensive literacy program to advance literacy skills, including pre- literacy skills, reading, and writing, for children from birth through grade 12, with an emphasis on disadvantaged children, including children living in poverty, English learners, and children with disabilities.

2. Pathways to Partnership Disability Innovation Fund

- Assistance Listing Number 84.421E FAIN: H421E230020
- US ED- Rehabilitation Services Administration
- Point of Contact: Cassandra Shoffler, Education Program Contact, Cassandra.shoffler@ed.gov
- The purpose of this competition is to support projects that foster the establishment of close ties among agencies, transforming collaboration into partnership. Project partnerships are comprised of, at a minimum, each of the following entities: SVRAs, SEAs, LEAs, CILs and demonstrating how services might be improved in the field, by developing and piloting a cohesive service delivery model that better manages its unique resources while coordinating efforts to improve outcomes for children and youth with disabilities and their support systems and facilitate successful transitions.

3. Advancing Wellness and Resiliency in Education (AWARE)

- CFDA Number 84.424F FAIN: S424F220002
- Substance Abuse and Mental Health Services Administration
- Point of Contact: Jennifer Teger, M.S., AWARE Program Coordinator, Jennifer.teger@samhsa.hhs.gov
- The purpose of the Project AWARE (Advancing Wellness and Resiliency in Education) program is to develop a sustainable infrastructure for school-based mental health programs and services. AWARE grantees build collaborative partnerships with the State Education Agency (SEA), Local Education Agency (LEA), Tribal Education Agency (TEA), the State Mental Health Agency (SMHA), community-based providers of behavioral health care services, school personnel, community organizations, families, and school-aged youth.

4. Special Education- State Personnel Development Grants Program

- Growing reading Excellence and Alaskan Teachers (GREAT) Alaska Special Education Professional Development Grant
- CFDA Number 84.323A FAIN: H323A230006
- US Department of Education- Office of Special Education Services
- Point of Contact: Jennifer H. Coffey, Education Program Contact, Jennifer.coffey@ed.gov
- The State Personnel Development Grants (SPDG) program provides grants to help state educational agencies (SEAs) reform and improve their systems for personnel preparation and professional development of individuals providing early intervention, educational, and transition services to improve results for children with disabilities.

5. Stronger Connections Grant Program

- CFDA 84.424F
- US Department of Education
- Point of Contact: Francisco Ramirez, Education Program Contact, francisco.ramirez@ed.gov
- The Bipartisan Safer Communities Act (BSCA) of 2022 provides historic funding to support State educational agencies (SEAs), local educational agencies (LEAs), and schools in establishing safe, healthy, and supportive learning opportunities and environments. This includes \$1 billion through Title IV, Part A of the Elementary and Secondary Education Act (ESEA) for SEAs to competitively award subgrants to high-need LEAs to establish safer and healthier learning environments and to prevent and respond to acts of bullying, violence, and hate that impact our school communities at individual and systemic levels, among other programs and activities.

Whether and, if so, how the applicant was able to successfully complete and manage the listed agreements.

DEED successfully implemented the listed agreements, and has a strong track record of completing federal grant awards, including with effective monitoring and reporting.

Reporting Requirements

DEED has a history of meeting reporting requirements, and for each assistance agreement:

- DEED submitted acceptable interim and/or final reports under each of those agreements.
- DEED adequately and timely reported on its progress toward achieving the expected outputs and outcomes under those agreements.

Staff Expertise

The applicant should include information on their organization, including a description of the staff's knowledge, expertise, qualifications, and resources, and/or the ability to obtain them, to successfully achieve the proposed project's goals and GHG reduction measures.

The Facilities section works to administer school capital projects that include state funding in order to ensure cost-effective execution of projects and provides guidance to districts pertaining to school facility planning, design, construction, and operations. The section manages State of Alaska educational assets, including land and buildings. Each year the Facilities section produces a prioritized list of statewide needs for school capital projects.

To encourage good stewardship of school facilities constructed, part of a school board's duties, per [AS 14.14.090\(10\)](#), is to provide for the development and implementation of a preventive maintenance and facilities management program for school facilities. Preventive maintenance (PM) is defined as "scheduled maintenance actions that prevent the premature failure or extend the useful life of a facility, or a facility's systems and components, and that are cost-effective on a life-cycle basis."

Each district is required to file five reports with DEED:

- 1. Maintenance Management Program** - a formal maintenance management program records maintenance activities on a work order basis, and tracks the timing and cost, including labor and materials, of maintenance activities in sufficient detail to produce reports of planned and completed work.

- 2. Energy Management Plan** - an energy management plan includes recording energy consumption for all utilities on a monthly basis for each building; for facilities constructed before December 15, 2004, a district may record energy consumption for utilities on a monthly basis when multiple buildings are served by one utility plant. As of November 2019, a plan incorporates regular evaluation of the effectiveness of and need for commissioning existing buildings. The department has developed [a facility re/retro commissioning assessment tool \(excel\)](#) and provided [a compliance guidance memo \(pdf\)](#) to assist districts. All districts will be assessed as of the June 1, 2021 preliminary compliance notice.
- 3. Custodial Program** - a custodial program includes a schedule of custodial activities for each building based on type of work and scope of effort.
- 4. Maintenance Training Program** - a maintenance training program specifies the training needs for custodial and maintenance staff and records the training received by each person.
- 5. Renewal & Replacement Schedule (R&R)** - a renewal and replacement schedule identifies, for each school facility of permanent construction over 1,000 gross square feet, the construction cost of major building systems, including electrical, mechanical, structural and other components; evaluates and establishes the life-expectancy of those systems; compares life-expectancy to the age and condition of the systems; and uses the data to forecast a renewal and replacement year and cost for each system.

All five reports as well as an accounting of the district's fixed asset inventory are required in order to be certified by the department that a district is eligible for the grant or debt reimbursement programs. The department's building maintenance specialist conducts an on-site certification assessment of school district preventive maintenance and facility management programs at least once every five years.

Team Biographies Summary

The project will be carried out by maintenance employees, administrative managers, and engineering consultants at each of the aforementioned school districts, with guidance from DEED and support from AML. Lori Weed contributes over a decade of specialization in educational finance practices to DEED. In her position as Finance and Support Services Director, Karen Morrison brings years educational financial experience from Alaska school districts to the State level. Rounding out the DEED team, Alex Watts is the Facilities Review Assistant where he has brought his previous experience with environmental compliance and facilities analysis to implement energy efficient facilities practices on a state level.

In the Aleutians East Borough School District, Anne Bailey, as the Borough Administrator, brings a decade of experience in initiating and overseeing maintenance and capital projects, managing in different capacities over the span of ten years, grants totaling \$60 million. Michael Franklin, the School District Superintendent, offers 27 years of teaching expertise and is known for his creative leadership. Eric Voorhees, a civil engineer at DOWL, manages projects for the district, contributing 16 years of experience.

In the Kuspuk School District, Branson Anania, the Director of Maintenance, brings six years of specialized experience in maintaining schools. Martha M. Morgan serves as the Business Manager, with 13 years of district-specific experience and a total of 16 years in educational business work. Brandon Blackham serves as the Director of Property Services for the Northwest Arctic Borough School District (NWABSD), bringing 20 years of specialized experience in electrical work. In his role, Blackham oversees the maintenance of 14 school buildings and teacher

housing, while also managing a team of seven staff members. Megan Williams contributes over 17 years of accounting expertise to NWABSD, specializing in school district accounting. Dena D. Strait is the Principal Capital Projects Manager for the NWABSD, where she brings 25 years of architecture and engineering experience.

Rod Morrison serves as the Superintendent for the Southeast Island School District, bringing extensive leadership experience in educational settings, including 21 years as a principal. His leadership roles extend beyond individual schools, having served as President of both the Alaska Council of School Administrators (ACSA) and the Alaska Association of Secondary School Principals. Christine Page Haufe complements the district's leadership team as the Human Resources Manager. Lucienne Smith, another accounting professional within the district, has 18 years of experience as co-owner of Alaska Education & Business Services, Inc where she has been able to work with several different Alaska school districts in an accounting and business consulting capacity. Scott Randall leads the maintenance team with 12 years of hands-on experience in operating his own farm, Randall demonstrates a strong entrepreneurial spirit and creativity. This background enables him to approach maintenance tasks with innovative solutions and a proactive mindset, contributing to the efficient upkeep of facilities within the school district.

Together, each of these school districts are managed by exceptionally capable people who are passionate about education and energy efficiency. Because costs are high and capital spending scarce in rural Alaska school districts, these administrators are deeply aware of their facilities' energy usage and they are capable of and committed to implementing energy efficiency projects.

