ENERGY INFRASTRUCTURE AND EFFICIENCY UPGRADE PROJECT
WORKPLAN NARRATIVE

1. OVERALL PROJECT SUMMARY AND APPROACH

The Montana Department of Environmental Quality (DEQ) is seeking $48.9 million in CPRG funding for implementation of four emission reduction measures identified in Montana's PCAP and described below:

Measure 1: School Energy Performance Initiative

This measure proposes to reduce GHG emissions from K-12 schools through implementation of energy conservation measures and strategies such as lighting upgrades, HVAC system optimization, insulation and weatherization, energy efficient appliances and equipment, renewable energy integration, energy/water efficient landscaping, and improved waste management. Additionally, by adopting these measures and strategies, schools benefit from improved health of indoor environments and cost savings due to improved facility operations and maintenance.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

This measure proposes to leverage private and public sector investments in cleaner vehicle fleets with voluntary, non-regulatory, incentive-based financing or rebate programs. This measure would provide financing or matching grant funds for strategic conversion or replacement of fleet vehicles with alternative fueled or electric power models, including but not limited to school and transit buses and vans, delivery vehicles, local government fleet vehicles, and utility service equipment. Replacement or upgrades of locomotive engines to more efficient and cleaner technology would also be eligible. Matching grants would be provided as rebates after a competitive request for applications evaluation process.

Measure 3: Investment and Improvement in Electric Grid Technology

The DEQ proposes to implement this measure that supports investments in innovative grid technology that improve the reliability and resiliency of the transmission and distribution system in the face of extreme weather events, growing demand for electricity, and increased development of variable renewable energy supplies. This measure includes projects that increase transmission and distribution system efficiency, that provide transmission service for new renewable energy generation, and improve integration and management of variable renewable energy supplies, including through the deployment of innovative energy storage systems, microgrids, or other technology.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

The Department of Commerce's 'Montana Facility Finance Authority' (MFFA), the administrator of the MT Commercial Property Assessed Capital Enhancements (C-PACE) program, seeks funding for energy efficiency audits and Independent Third-Party Reviews (ITPR) to be performed on commercial buildings throughout Montana. 'Last Best PACE' - the State's C-PACE program – is an innovative clean energy financing tool that provides 100% upfront capital to commercial property owners who want to upgrade their buildings with energy efficiency, renewable energy, and water management systems. To be eligible for the C-PACE program, however, property owners must have an energy audit, followed by ITPR. Since these can be cost-prohibitive to many Montana businesses, MFFA would use CPRG funds to help cover the costs of those required Energy Audits and ITPRs for eligible properties, thus enabling subsequent energy enhancements and associated emission reductions.

Table 1. Funding requests and the reference pages to the MT PCAP

Measure No.	Measure	Requested CPRG Funding	MT PCAP Page #
1	School Energy Performance Initiatives	$24,595,948	19
2	Conversion of Fleet Vehicles to Cleaner Fuels	$10,369,695	36
3	Investments in Electric Grid Technology	$11,983,832	33
4	Commercial Energy Efficiency Measures (C-PACE Audits)	$2,000,000	41
TOTAL		**$48,949,475**	

Together, these four initiatives aim to enhance energy efficiency, reduce costs, and promote sustainability across various sectors. They also enable investments in energy audits and efficiency improvements, contributing to a cleaner environment and creating jobs. DEQ proposes to undertake the reduction efforts described in this workplan if awarded funding under the CPRG implementation grants general competition. Roles and responsibilities are described in Table 2.

Table 2. Roles and Responsibilities

Entity	Roles and Responsibilities
DEQ	• Executing subaward agreements and overseeing subrecipients • Tracking, measuring, and reporting on project progress on expenditures and purchases, accomplishments on proposed timelines and milestones • Submitting required semi-annual and final report on grant implementation and planned activities to EPA • Community and stakeholder outreach and education within Montana • Overseeing development of procurement and selection process of subrecipients • Developing and issuing project solicitation
MFFA (Subaward, Measure 4)	• Complying with subrecipient requirements under EPA's Subaward Policy • Tracking and reporting to DEQ on project progress, expenditures and purchases • Tracking, measuring, and reporting to DEQ on accomplishments and proposed timelines and milestones • Community and stakeholder outreach and education

Table 3 details tasks and milestones for implementation of the four proposed measures. The period of performance is from December 2024 – December 2029.

Table 3. Tasks and Milestones for Implementation

Measure	Task Description	Anticipated Milestone Dates	Assumptions
Schools	Selection and award to program Third Party Administrator (TPA) / Project Owners' Representative	Dec. 2024-March 2025	Contractor selected using competitive Request for Proposals in accordance with state procurement requirements.
Schools	DEQ prequalification of Energy Service Providers (ESP) and Design-Build firms approved to partner with schools on projects.	Dec 2024-March 2025	Montana already pre-qualifies ESPs for K-12 school and local government Energy Performance Contracts (EPC). A similar process will be conducted for Design-Build firms.

Schools	In consultation and partnership with DEQ and stakeholders, TPA/Owners' Rep designs, publicizes, and launches program to award GHG reduction funding to schools through a Request for Applications (RFA) process.	April 2025-Sept. 2028	Expectation of a two-step process for project selection: an initial short application and then invitation to submit full application based on scoring of initial submittal. Awards will be prioritized for schools showing strong potential for GHG reduction and energy savings in underserved, EJ, energy burdened, and low-income communities.
Schools	Schools receiving a funding award will procure and select a DEQ-approved ESP or Design-Build Firm.	April 2025 – Sept. 2028	It is expected that schools will separately enter into contracts with their selected firm.
Schools	DEQ subawards project funding to individual school districts.	June 2025 – Dec 2028	DEQ will individually subaward project funding through a subaward agreement between DEQ and the school district. Each agreement will have a specific Scope of Work and include required CPRG flow-down requirements such as Davis-Bacon Act wages and Build America Buy America.
Schools	Projects move from contract into construction. TPA / Owners' Rep continues to monitor projects for timeliness, quality, budget, and adherence to subaward terms. TPA/Owners' Rep submits updates.	June 2025 – end of funding period	DEQ will continue to monitor all agreements, but TPA/Owners' Rep will ensure that scope of work and agreement requirements are followed.
Fleets	Community engagement around program design specifics	Dec. 2024 – Jan. 2025	Concurrent with development of program eligibility requirements process
Fleets	Preparation of a program guide, application, and promotional materials and community engagement around these materials	Dec. 2024 – Jan. 2025	Upon execution of agreement between EPA and DEQ
Fleets	Announce opening of application period, conduct outreach to stakeholders and communities about program guide, and solicit applications for projects	March 2025	Three months following completion and publication of the program guide and promotional materials
Fleets	Review applications, select projects, and enter into subaward agreements with project sponsors	June – Aug. 2025	One month to evaluate and select successful applications and two months to enter into agreements with project sponsors
Fleets	Provide technical assistance to awardees for duration of the project	Aug. 2025 – June 2027	Based on agreed upon project duration with awardees
Fleets	Continued community engagement during and following project implementation	Aug. 2025 – completion of measure project activities	Based on agreed upon project duration with project sponsors
Fleets	Disburse funds to project sponsors upon completion of project activities	Aug. 2025 – June 2027	As established in the agreements with project sponsors
Fleets	Revise program guide, promotional materials, and application as needed in response to participant and community feedback	Sept. – Oct. 2025	This could be annually or could be left off depending on how much funding remains after first round
Fleets	Repeat steps as needed for as many funding rounds as necessary to award all vehicle replacement funds	March 2026 – complete allocation of funds	This would be based on how much funding remains after first round

Grid	Stakeholder engagement on program design, eligibility, need, projects, technical assistance	Dec. 2024 – January 2025	Activities conducted in parallel with funding opportunity parameters
Grid	Open application period for subawards and host a public meeting to walk through program elements, answer questions, etc.	Feb. 2025 – April 2025	Contingent on execution of award agreement between DEQ and EPA
Grid	Review applications for subawards, select successful projects, enter into subaward agreements with eligible entities.	May 2025 – Sept. 2025	One month to evaluate score and select successful projects, two months for federal NEPA/Build America Buy America (BABA) process compliance review, one month for approval and execution of subaward agreement between DEQ/eligible entities.
Grid	Grid resilience project construction starts	Sept. 2025 – Oct. 2025	NEPA/BABA and other federal requirement approval processes are complete
Grid	Progress and financial reports and invoices for project costs submitted by subrecipients to DEQ.	Quarterly and annual basis as project cost invoices are verified and upon project completion between Dec. 2025 – Dec. 2029	Assumes project reporting periods will be on federal fiscal year.
Grid	DEQ disburses funding to subrecipients for project costs upon submittal and approval of project cost invoices.	Quarterly basis between Dec. 2025 and Dec. 2029	Assumes project sponsors (subrecipients) will provide a 1:1 match for most eligible entities and a 1:3 match for small utilities. Project period starts when subaward agreement is executed and ends one year after project is completed.
Grid	Conduct quarterly meetings with stakeholders, grid resilience project sponsors, and the public about grid resilience project needs, implementation challenges and barriers and how to align goals with needs in disadvantaged communities. After projects are selected, quarterly stakeholder and subrecipient meetings will ensure that project milestones, outputs and outcomes are on track and being achieved.	Quarterly basis between January 2026-April 2029	
Grid	Repeat steps 3-7 as necessary to distribute grid resilience funding to eligible subrecipients.	August 2026-total funds from all sources are expended on projects	This would depend on how much funding there is available from existing sources and CPRG funds after first round of selected projects are funded.
C-PACE	Selection of energy audit recipients through an open competitive process	Dec. 2024 – Dec. 2029	Competitive process is ongoing until funds are expended
C-PACE	Community engagement around program design specifics	Dec. 2024 – June 2025	Engaging with Montana Economic Development Organizations (“EDO”) to market program

C-PACE	Preparation of an application, and promotional materials and community engagement	Dec. 2024 – July 2025	Provide promotional materials following acceptance of grant
C-PACE	Provide technical assistance to energy audit recipients	Dec. 2024 – Dec. 2029	Based on agreed upon project duration
C-PACE	Disburse funds to energy audit companies to perform energy audits on behalf of recipients	Dec. 2024 – Dec. 2029	As established in the agreements with energy audit companies
C-PACE	Revise program materials as needed in response to participant and community feedback	Dec. 2024 – Dec. 2029	On an as-needed basis

Table 4. Risks and Mitigation Strategies

Measure #	**Risk**	**Effect on GHG emission reductions**	**Mitigation Strategy**
Schools	Delays in project schedule and start of construction due to workforce availability of engineering/design consultants and professional contractors.	Delays may reduce cumulative GHG emission reductions in the near-term (2025 – 2030)	Rolling projects over the first three years of funding eligibility. DEQ is also developing energy sector workforce development programs, separately funded by DOE, to help mitigate workforce constraints.
Schools	Delays in project schedule and construction start due to supply chain delays and BABA requirements.	Delays may reduce cumulative GHG emission reductions in the near-term (2025 – 2030)	Rolling projects over the first three years of funding eligibility. Early engagement with equipment suppliers.
Fleets	Delays in preparation of program materials and award process	Delays may reduce cumulative GHG emission reductions in the near-term (2025 – 2030)	Work with EPA to ensure CPRG project requirements are included in program materials
Fleets	Program undersubscribed in certain geographic areas	GHG emission reductions and criteria co-benefits may not occur over the same geographic scope as anticipated	Tracking of applicant locations and targeted outreach to areas where the program is not receiving applications. Targeted outreach in undersubscribed areas for subsequent funding opportunities.
Grid	Delays in project schedule and start of construction due to delays in environmental reviews and BABA waiver approval/compliance reviews	May affect cumulative GHG emission reductions in the near term (2025-2030)	Ensure that grid resilience projects meet all federal requirements before subaward agreements are signed. Prioritize projects that have already completed environmental review and BABA requirements
C-PACE	Eligible subrecipients may apply for funding for projects that differ in type, size, or scope from projects assumed in greenhouse gas analysis.	May affect the cumulative GHG emission reductions and cost-effectiveness of each project.	Include greenhouse gas reductions as a criteria in application scoring/review. Projects that can demonstrate more greenhouse gas emission reductions will score higher.

C-PACE	Delays in program funding process	Delays may reduce access to the enabling measure and reduce cumulative GHG emission reductions in the near-term (2025 – 2030)	Inform community partners and EDOs of timeline delay
C-PACE	Program undersubscribed	Enabling measure of energy audits may not occur, which would reduce scope of program and energy efficiency measure implementation	Perform targeted outreach to Montana businesses and EDOs in undersubscribed areas
C-PACE	Cost increase of energy audits and ITPRs	If the cost increases for energy audits or ITPRs, fewer projects can be completed, thus reducing GHG emission reductions and co-benefits	Negotiate rates as close to original contracted amounts as possible to keep energy audits and ITPR costs low

Below is a further description of how the proposed measure will advance CPRG goals:

Measure 1: School Energy Performance Initiative

This measure was selected as a priority because it will deliver meaningful and replicable GHG reductions through implementation of proven technology and energy performance upgrades; support student health and community resilience co-benefits in underserved communities; and because it received extensive public and stakeholder support during the PCAP development process. CPRG funding will support investment in facility upgrades designed to simultaneously provide cost savings and performance upgrades, while cutting the emissions profile of Montana schools. Elements of the project will include:

- Deep Energy Retrofits in K-12 Schools Buildings: CPRG funding will enable comprehensive energy efficiency renovations in schools, providing durable energy and emissions savings. Energy measures will be tailored to meet the needs of individual schools but will likely include building envelope sealing and insulation, heating, ventilation, and cooling system upgrades, lighting retrofits, water distribution and treatment, and proper waste handling.
- Renewable Energy Sources: Funding will allow schools to implement on-site renewable energy systems to better manage facility energy costs, reduce emissions, and, where appropriate, install back-up energy storage to improve the resilience of these essential community facilities. On-site renewable energy systems may include solar PV and geothermal heating and cooling systems.
- Community Benefits: This measure will target substantial community benefits in disadvantaged communities through improved indoor air quality, reduction of criteria air pollutants (CAPs) and hazardous air pollutants (HAPs) from legacy coal and fuel oil heating systems, and improved facility and community energy resilience.
- Leverage Complementary Funding Sources: This program will be designed to replicability and to maximize the reach of CPRG funding by utilizing the state's Energy Performance Contracting program, where appropriate; U.S. Department of Energy State Energy Program funds for engineering analysis and baseline energy audits; utility incentives; direct-pay tax incentives; and school district match of 0-25%, depending on the financial status of the district.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

This measure was selected as a priority because it will complement existing funding programs, has a relatively short project activity period, will be enhanced with state and local matching funds, and was supported during the PCAP development process.

The measure will augment private and public sector investment in cleaner vehicle technology. Existing incentive programs include EPA's Clean School Bus Program, and DEQ's Clean Transportation Program, which historically has provided pass-through EPA Diesel Emissions Reduction Act and Volkswagen Settlement funding to public and private

entities for the replacement of older diesel vehicles and equipment with alternative fuel, cleaner diesel, and electric models. Schools and other entities that move student transportation systems from fossil fuel to less GHG emitting fuels such as propane, natural gas, or zero-emissions significantly reduce mobile source air toxics.

DEQ intends to build on existing clean transportation funding programs to efficiently implement this measure. Funding will be made available to public and private entities to replace older diesel vehicles with new zero-emission vehicles. For a switcher locomotive engine replacement, the old unregulated/Tier 0 engine can be upgraded to a Tier 4 engine. For each award, the entity will enter into a subrecipient agreement with DEQ after which project activities can begin. CPRG funds for this measure will be complemented, in part, by cost-share requirements from fleet operators to pay a portion of the cost of the new vehicle. DEQ will complement CPRG funds with approximately $3 million of Volkswagen Diesel Emissions Settlement funds to increase the total number of projects that can be funded, thereby increasing total emission reductions.

Measure 3: Electric Grid Technology

This measure was selected as a priority because it will support investments in innovative grid technology that reduce power sector greenhouse gas emissions and improve the reliability and resiliency of the transmission and distribution system in the face of extreme weather events, growing demand for electricity, and increased development of variable renewable energy supplies.

Implementation of this measure will be in the form of matching grant funds to utilities, transmission operators, and other eligible entities to support investments in innovative electric grid technology solutions that improve the reliability and resiliency of the transmission and distribution system, while simultaneously reducing power sector emissions. This measure will augment the existing Grid Resilience and Reliability Grants Program, funded by the U.S. Department of Energy (DOE) and administered by DEQ's Energy Bureau. Projects eligible for funding will include but not be limited to investments in electric grid technology, including measures that increase transmission system efficiency, that provides transmission service for new renewable energy generation, and improves integration and management of variable renewable energy supplies, including through the deployment of innovative energy storage systems, microgrids, or other technology.

CPRG funds for this measure will be complemented, in part, by cost share requirements from subrecipients to pay a portion of the cost of each grid resilience project. Cost share requirements in existing funding sources would require most eligible entities to provide a 1:1 match of the total funds awarded for each project. Small utilities would be required to provide a 1:3 match of total funds awarded.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

This measure was selected because energy audits are a critical first step to getting energy efficiency measures installed and play a crucial role in improving the performance and sustainability of infrastructure. The audits do not directly result in GHG emissions, so quantification is not provided for this enabling measure.

The Energy Audits and ITPRs for the C-PACE program will be made available to eligible businesses in Montana that have established a C-PACE District. An estimated 60% of commercial building stock is in a C-PACE-eligible area with additional local governments pursuing the adoption of C-PACE Districts.

Demonstration of Funding Need

Measure 1: School Energy Performance Initiative

Approximately 60% of Montana's school infrastructure pre-dates 1960. The potential for energy and emissions savings in Montana school facilities is vast. CPRG implementation funding is essential to implement this measure, and to establish replicable models for further energy savings and emissions reduction projects in schools.

In 2008, Montana's Architecture and Engineering Division released a summary report of Facility Condition Assessments conducted in 2,128 K-12 buildings. 475 of these buildings were constructed between 1920-1929 (post WWI) and 540 were constructed between 1950-1959 (post WWII). While 16 years have passed since this survey was conducted, many of these conditions persist.

In 2022, Montana had 108,894 students enrolled in a total of 684 schools in 302 school districts. Of the 684 schools, 65 – almost 10%! - are considered "one room schoolhouses." Of the 302 school districts, 96% are classified as rural. Montana's rural districts include our Native American students and a disproportionate percentage of families considered "underserved." Additionally, rural districts tend to have lower property values and therefore property taxes. Property taxes are the main source of funding for most districts and are generally insufficient to address needed energy performance upgrades.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

CPRG implementation funding is necessary to fully implement this measure. DEQ has applied for and received related grants; however, these grants are not sufficient to fully implement the proposed measure. Table 5 lists federal and non-federal funding sources that DEQ has explored or applied for related to the proposed measures.

Measure 3: Electric Grid Technology

CPRG implementation funding is necessary to fully implement this measure. The DEQ has applied for related federal formula funds; federal formula funds are not sufficient to fully implement the proposed measures. The need for grid upgrades across the over 60,000 miles of distribution lines and 7,000 miles of transmission lines in Montana is significant. The funding needed to modernize Montana's aging transmission and distribution grid is much greater than the existing funding available through limited formula funds. Applications for grid resilience project funding opportunities in neighboring and similarly rural states have been at least double the amount of funding available in these states. Montana anticipates at least the same demand for projects. Grid resilience measures that also lead to direct emission reductions including distribution system upgrades, utility-scale, and community-scale microgrids are capital-intensive projects that can cost between $1-$10 million to deploy. CPRG funding will enable DEQ to leverage existing federal funding and matching funds to prioritize these projects.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

Based on the specific energy conservation measures and/or renewable energy systems the property owner plans to install, the required Energy Audit costs can range from $5,000 to $30,000. In addition, MT C-PACE requires an ITPR to verify the information in the Energy Audit. A basic "desk ITPR" can cost approx. $1,500 to $3,500, with a more involved ITPR costing as much as $10,000. These initial costs can be prohibitive to the small business owner in Montana wanting to make energy-efficient improvements to their property. CPRG funding would be used to cover the costs of 15 energy audits/year at $20,000 each, for five years. In addition, funding would be used to cover 20 Independent Third-Party Reviews (ITPR)/per year at $5,000 for 5 years. If energy audit or ITPR costs come in lower than expected, more audits will become available until the grant funds are fully expended.

Table 5 lists federal and non-federal funding sources that DEQ has explored or applied for related to the proposed measures.

Table 1. Funding Sources Explored for Proposed Measures

Measure	Funding Source	Need for CPRG funding
1. School Energy Performance Initiative	DOE State Energy Program Formula Grant	This DOE grant currently funds DEQ's SMART Schools program, a STEM program focused on energy efficiency, renewable energy and sustainable practices. Through this funding source, DEQ anticipates providing a limited amount of funding to assist schools procuring Investment Grade Audits.
	State General Fund	Through 90-4-11, MCA, DEQ is tasked with administration of the state's Energy Performance Contracting (EPC) program. The CPRG schools measure will draw on EPC materials and staff expertise funded by general fund budget to support project deployment.
	School district funding sources	School district funding sources derived from local property tax revenue, and federal and state appropriations, have proven inadequate to meet the energy performance needs of school facilities. However, depending on the financial situation of the subaward applicant, schools will be required to supply a match of 0-25% of project costs. Details for this calculation will be developed by the Third-Party Administrator, in partnership with DEQ and other stakeholders.
	Federal Direct-Pay Tax Credits	Third-Party Administrator and the school's selected design firm will ensure schools receive eligible federal direct-pay tax credits ranging from 30-50% of project costs.
2. Strategic Conversion of Fleet Vehicles to Cleaner Alternatives	Volkswagen Diesel Emissions Settlement	The limited Volkswagen Settlement funds cannot fund all the interest in fleet vehicles in the state.
		DEQ's work to fund 11 electric school buses, 2 electric street sweepers, and 4 electric airport ground support equipment outweighs the remaining funds.
		DEQ would fund fewer projects in a future funding opportunity using only the remaining Volkswagen funds.
	EPA's Clean School Bus Program	The first rebate program funding opportunity left 10 applications and 62 electric school buses unfunded in Montana.
	EPA's Diesel Emissions Reduction Act	In 2019, DEQ set a goal of funding an electric school bus with DERA funds but due to the low-cost share from EPA, DEQ could not find an interested school district. DEQ found later success with Volkswagen funds that allowed for higher-cost share matches.
	EPA's Diesel Emissions Reduction Act	In 2021, DEQ proposed to upgrade a switcher locomotive engine to a Tier 3 engine. Due to cost share, technological, and operational requirements, DEQ did not end up funding any switcher engine projects. Higher cost share allowance and flexibility on eligibility requirements would generate more interest.
3. Electric Grid Technology	Grid Resilience and Reliability State and Tribal Formula Grants (U.S. Dept of Energy)	Limited Grid Resilience and Reliability formula funds are not enough to meet the need for these projects across the state. The cost of battery storage and distributed solar projects can easily be between $1-10 million. Neighboring states that have awarded Grid Resilience Formula funds are receiving funding requests for double to triple the amount of funding they have available.
	State Energy Program (SEP) Supplemental (U.S. Dept of Energy)	DEQ has set aside $1-2 million of SEP supplemental funds for microgrid projects. DEQ anticipates funding no more than 2 microgrid projects with this funding. CPRG funding is needed to augment this funding so that at least 4 microgrid projects could be conducted.
	Utility and other subrecipients funding sources	Utilities have capital accounts for funding improvements to their transmission and distribution grids. For investor-owned utilities, spending funds in these accounts may need to be approved by utility regulators. Aging grid infrastructure coupled with increased frequency of extreme weather events is causing the need and demand for grid resilience projects to rapidly exceed the funds utilities have available. Funding that other eligible subrecipients have for grid resilience projects may be even more limited than utilities. Under this measure, all eligible entities will be required to provide matching funds established under the existing formula funding programs. Match

		requirements include a 1:3 match for small utilities and 1:1 match for all other eligible entities.
4. Energy Efficiency – C-PACE Audits & ITPRS	MFFA	MFFA provides funds from its own reserves to rural healthcare facilities, which can be used for energy audits.

Transformative Impact
The measures proposed in this application have the potential to create transformative impacts that lead to further significant additional GHG emission reductions.

Measure 1: School Energy Performance Initiative
Schools are the pillars of Montana communities, and as such, the successful deployment of energy performance and emission reduction projects in schools across the state will reach well beyond the walls of those facilities. CPRG funding will drive innovation in Montana's energy engineering, architecture, and trades sectors to deliver these projects, with applicability to subsequent non-CPRG funded facility retrofits. Energy efficiency programs educate students, teachers, and staff about sustainable energy practices. This knowledge extends beyond the classroom, empowering individuals to make informed choices. Integrating technology and digital tools enhances energy management, providing a platform for hands-on learning about smart systems, data analytics, and automation.

Upgraded facilities enhance both student and staff health by providing better indoor air quality through improved ventilation and improved learning environments from upgraded lighting. This positively affects attendance, performance, and overall well-being. Energy-efficient schools save on utility bills, allowing more resources to be allocated to education. Students' enthusiasm for energy efficiency extends beyond the classroom, creating a ripple effect, where families learn from their children, leading to energy saving practices at home.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives
The measures proposed in this application have the potential to create transformative impacts that lead to further significant additional GHG emission reductions.

By replicating an existing DEQ program and scaling it to potentially fund more vehicle replacements to zero-emission models, this measure will increase the speed of deployment of clean transportation technologies. Replicating the existing DEQ program, already used to fund the deployment of 11 electric school buses, two electric street sweepers and four airport ground support equipment, DEQ will be able to release a funding opportunity to fleets faster than if it had to create a new program. DEQ still receives inquiries on if there will be another round of funding from the program so interest in the program continues.

Montana is still in the early adoption phase of zero-emission fleet vehicles such as buses and trucks. There are currently 16 electric school buses operating, two electric street sweepers, and 12 electric transit buses. With funding to build on these early successes, DEQ's existing programs can quickly deploy funds for more zero-emissions vehicles.

Measure 3: Electric Grid Technology
The electric power sector is responsible for the largest percentage of Montana's greenhouse gas emissions. Enhancing the resilience and reliability of aging energy infrastructure and the existing energy grid is essential to deploying battery storage, PV, energy efficiency, and other clean energy resources. Transitioning to clean energy resources is essential to reducing emissions from the electric power sector.

Projects that improve the resilience and reliability of the electric grid help accelerate integration of utility-scale and distributed renewable energy resources. Grid resilience projects such as transmission or distribution line reconductoring reduce line losses, thereby reducing generation necessary to meet the State's energy demand. Grid resilience projects

can enable building, appliance, and transportation electrification. Electrification of end uses is a key strategy to reducing emissions across the energy sector.

Providing subawards for technologies like energy storage to cities and counties dramatically improve their ability to develop renewable energy projects at the speed and scale necessary to meet our 2030 goal.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

Energy audits play a crucial role in shaping energy efficiency improvements, driving positive changes, and helping to reduce CO_2 in Montana. Energy audits encourage commercial property owners to upgrade their equipment for better efficiency by identifying areas for improvement. Audits promote behavioral shifts that reduce energy waste. When property owners become aware of the cost of energy consumption patterns, they are more likely to adopt energy-saving practices that will alleviate the cost burden. Energy audits encourage the integration of renewable energy sources for all property types. By assessing a building's energy needs and potential, audits guide decisions on incorporating solar panels, battery backups or other energy solutions. Energy audits are central to any commercial building's energy efficiency improvement plan by showing the cost saving and CO_2 emission reductions. Energy audits and ITPRs are the treasure map to finding hidden savings and reducing CO_2 emissions one building at a time.

1. IMPACT OF GHG REDUCTION MEASURES

Table 6 provides estimates of the cumulative emission reductions in million metric tons of carbon dioxide equivalent ($mtCO_2e$) anticipated from implementation of the proposed measures for two time periods: 2025-2030 and 2025-2050. Further details on quantification methods, relevant assumptions, annual emission reduction estimates, and any uncertainties associated with the estimates are provided in the Technical Appendix to this application.

Table 2. Cumulative GHG Emission Reductions Anticipated from Implementation of Proposed Measures

Measure #	Priority Measure	PCAP: GHG Emission Reductions (MMTCO2e)		Imp. Grant: GHG Emission Reductions (MMTCO2e)	
		By 2030	By 2050	By 2030	By 2050
1	Incentivize School Energy Performance Measures	0.008	0.038	0.011	0.065
2	Conversion of Fleet Vehicles to Cleaner Fuels	0.014	0.077	0.004	0.014
3	Investments in Electric Grid Technology	1.49	7.02	0.024	0.158
	TOTAL	**1.51**	**7.14**	**0.039**	**0.237**
4	Energy Efficiency Measures (C-PACE Audits) – Enabling Measure	variable	variable	variable	variable

Measure 1: School Energy Performance Initiative

Montana's school buildings are diverse in age, size, student population, geography, and fuel use. It is challenging to predict a specific and comprehensive list of energy conservation measures required to fulfill this measure due to the potential variability of the applicant pool and their specific needs. The emission reductions submitted in the original PCAP have been revised to better reflect requested funding, anticipated projects, and assumption of a solar installation for each funded project. Although emission reductions may be less than other measures, the community benefits are great.

Recently, the DEQ's State Buildings Energy Conservation Program (SBECP) conducted a lighting upgrade for the School for Deaf and Blind (SFDB). SFDB is a state-owned K-12 facility in Great Falls, MT that serves children with special needs.

Project costs included asbestos mitigation and upgrade to current code. These costs were covered by the school. The lighting portion of the project cost $308,033 and projects savings of 270,721 KWH/year and $32,024/year; resulting in an average reduction of 189 metric tons CO_2e/year. This project not only saves energy and money while reducing emissions, but also provides specialized color/temperature tunable lights that are programmable to the individual needs of each classroom, delivering a true community benefit.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

The estimated vehicle/equipment replacement numbers differ in Table 2 from page 34 of the PCAP after development of a budget for this measure. DEQ is requesting $10.37 million for this measure and will be supplementing it with $3 million from the State of Montana's allocation from the Volkswagen Diesel Emissions Settlement and requesting that fleet entities applying for funds provide a cost match amount. The addition of the Volkswagen funds and the local match requirement will allow this measure to fund more total fleet vehicle replacements.

Implementation of the proposal will result in durable GHG emission reductions. Previous fleet vehicle conversion funding opportunities from DEQ have required the new vehicles be kept in service for at least five years. It is the intent of this measure to implement those previous funding opportunities using the same requirements. Given the estimated timeline in Table 2, fleet vehicle conversions could begin as early as August 2025 with a goal of conversions being completed by June 2027.

DEQ intends to increase the number of vehicle conversions by adding $3 million of Volkswagen Diesel Emissions Settlement funds to the measure's budget. Additionally, the measure will require applicants to provide a cost share amount ranging from 15-30 percent depending on the conversion type.

Measure 3: Electric Grid Technology

The impacts of this measure will depend on the type of projects that eligible subrecipients propose in response to the competitive request for applications that DEQ will issue annually. The estimated emission reductions submitted in the PCAP have been revised to better reflect requested funding and parameters of existing funding sources. DEQ is requesting $11,983,832 for this measure.

Emissions impacts would vary depending on the type of measures implemented. Examples of grid technology measures that would deliver emissions reductions include transmission and distribution system reconductoring or other efficiency improvements that reduce line losses; and, technology deployment, including energy storage systems, that enables the reliable integration of more renewable energy integration throughout the transmission system. These measures would reduce emissions by increasing the reliable integration of renewable energy generation, and by reducing total energy generation necessary to meet demand. Measures that enhance the reliability and resilience of the distribution grid also help support electrification of vehicles, space heating and other end-uses. As the percentage of renewable and zero-carbon emitting generation resources on the grid increases, electrification helps drive and enable additional, long-term GHG emission reductions across all energy sectors.

DEQ intends to fund grid technology projects that provide resilience and greenhouse gas reduction benefits by supplementing $14 million from the U.S. Department of Energy's Electric Grid Formula Grants to States and Indian Tribes Program to the measure's budget. This measure will also require subrecipients to provide a 1:1 or 1:3 match of the funding awarded for each project depending on the size of entity applying for funds.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

Because building efficiency conditions can vary significantly and implementation of any identified measures may be done partially or over a long period of time, it is difficult to accurately estimate the impact of this enabling measure. The MFFA paid for energy audits for nonprofit healthcare facilities from 2019-2021. Of those 27 audits, there were a few notable cases that show the value of an audit toward encouraging implementation.

- St. Patrick's Hospital in Missoula, Montana: By performing basic maintenance and changing its air handler mechanical systems that the audit identified, the hospital was able to recognize a savings of $160,000 per year and over 1.75 million kWh saved annually.
- Roosevelt Memorial Medical Center in Culbertson, Montana: The facility was experiencing higher than average heating costs due to aging and inefficient air handlers and heaters. By switching to a more energy efficient system, the facility was able to annually save over $12,000 and 195,500 kWh.

These savings would not have been possible without an energy audit performed on the facilities. For this reason, the MFFA believes this enabling measure will precipitate more and improved energy efficiency measures on commercial properties.

The cost-effectiveness of the three non-enabling measures in this application is $1,260 per ton of CO_2e reduced, as illustrated in Table 7 below.

Table 7. Cost effectiveness of the proposed measures

Measure No.	Measure	Requested CPRG Funding	Cumulative GHG Emission Reductions (MMT CO_2e)		Cost Effectiveness $/MT CO_2e
			By 2030	By 2050	2025 - 2030
1	School Energy Performance Initiatives	$24,595,948	0.011	0.065	$2,225
2	Conversion of Fleet Vehicles to Cleaner Fuels	$10,369,695	0.004	0.014	$2,948
3	Investments in Electric Grid Technology	$11,983,832	0.024	0.158	$494
	TOTAL	**$48,949,475**	**0.039**	**0.237**	**$1,260**
4	Commercial Energy Efficiency Measures (C-PACE Audits)	$2,000,000	Enabling Measure		

2. ENVIRONMENTAL RESULTS – OUTPUTS, OUTCOMES, AND PERFORMANCE MEASURES

Expected Outputs

Measure 1: School Energy Performance Initiative

DEQ seeks CPRG funding to provide 13 subawards to schools for energy performance projects, which will cover the installation of an estimated 12 50-kw Solar PV systems, as well as HVAC, lighting, and weatherization upgrades, which will be determined based on the schools' needs. DEQ will contract with one Third-Party Administrator to support administration of this measure.

Energy-efficient upgrades play a pivotal role in enhancing both resilience and adaptation to the impacts of climate change. Energy-efficient upgrades, such as better insulation, efficient lighting, and smart HVAC systems, lower energy consumption. By reducing energy demand, buildings become more resilient during power outages or supply disruptions. Upgrades to building envelopes (walls, roofs, windows) improve thermal performance. Well-insulated structures are better equipped to withstand extreme temperatures, whether hot or cold.

Installing solar panels or wind turbines provides localized power generation. Upgrades make buildings more climate-ready by improving their ability to withstand extreme weather. This includes reinforcing structures against floods,

storms, and other climate-related risks. Energy-efficient measures also contribute to mitigation efforts by reducing greenhouse gas emissions. Lower energy consumption means fewer emissions, aligning with climate goals.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

This measure will replace 31 older diesel fleet vehicles with zero-emission vehicles, including:

- 13 school buses
- 3 Street sweepers
- 4 Transit buses
- 3 Garbage trucks
- 3 Airport Pushbacks
- 4 Airport belt loaders
- 1 Locomotive switcher engine

The upgrade to one switcher locomotive engine with a cleaner, more efficient engine will result in the reduction of approximately 500 short tons of CO_2 over five years based on EPA's Diesel Emissions Quantifier tool. Implementation of all projects will be done by existing DEQ Energy staff.

The program scoring criteria will prioritize low income and disadvantaged communities as well as areas with air quality problems.

Measure 3: Electric Grid Technology

DEQ is requesting funding for an estimated 10 subawards for electric grid technology projects, that will cover:

- 2 distribution system upgrades:
    - Upgrades are for feeder lines to interconnect to microgrids or other distribution-level storage or generation resources
- 2 utility scale microgrids-includes:
    - Two, 2MW/2MWh battery energy storage systems; and,
    - 2 MW solar PV system
- 6 community microgrids installed at critical care facilities (hospitals, 911 emergency centers, community centers):
    - Six 75kW/500kWh battery energy storage systems; and,
    - Six roof-mounted 131kW Solar PV.

Due to variability in subaward projects, location, and applicant type it is difficult to quantify the benefits from grid resilience upgrades. The program scoring criteria will prioritize projects that provide sufficient data and quantify expected reductions in frequency and duration of outages, GHG emissions, and other benefits in low income and disadvantaged communities.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

15 energy audits and 20 ITPRs will be completed per year for a five-year period. This enabling measure will ensure more CO_2 emission reduction projects are ready for implementation and setup. Because building efficiency conditions can vary significantly and implementation of any identified measures may be done partially or over a long period of time, it is difficult to accurately estimate the impact of this enabling measure. The EPA's long term performance goal to reduce greenhouse gas emissions will be accomplished by providing enabling energy audits that allow building owners to choose cost-effective GHG reduction measures.

For all four measures, DEQ will submit the required semi-annual progress reports and a detailed final report.[1]

Expected Outcomes:
The implementation of the 3 measures, listed in Table 8 below, will result in a total reduction of 38,834 metric tons of CO2e by 2030, and 236,555 metric tons by 2050. Additional reductions will be realized by the implementation of the enabling measures for audits and ITPRs for C-PACE projects; however, they cannot be quantified given the various possibilities of energy efficiency upgrades resulting from the audits and ITPRs, as discussed previously.

Table 8. Reduction in CO_2e emissions

Measure No.	Measure	Cumulative GHG Emission Reductions ($MMT CO_2e$)	
		By 2030	By 2050
1	School Energy Performance Initiatives	0.011	0.065
2	Conversion of Fleet Vehicles to Cleaner Fuels	0.004	0.014
3	Investments in Electric Grid Technology	0.024	0.158
	TOTAL	**0.039**	**0.237**
4	Commercial Energy Efficiency Measures (C-PACE Audits)	Enabling Measure	

Table 9 below illustrates the reduction in emissions of Criteria and Hazardous Air Pollutants (CAP and HAP respectively) by 2030, as a direct result of the implementation of the 3 non-enabling measures.

Table 9. Criteria Pollutants

Measure No.	Measure	Emissions Reduction by 2030							
		PM_{10}	$PM_{2.5}$	SO_2	NOx	CO	VOC	Pb	HAPs
		tons	tons	tons	tons	tons	tons	tons	lbs
1	School Energy Performance Initiatives	0.52	0.48	2.14	5.91	2.85	0.23	9.78E-06	79.69
2	Conversion of Fleet Vehicles to Cleaner Fuels	1.67	1.27	-0.66	48.10	1.66	3.64	--	--
3	Investments in Electric Grid Technology	1.80	1.53	8.85	14.91	0.03	0.48	--	--
TOTAL		3.99	3.28	10.33	68.91	4.54	4.35	9.78E-06	79.69
4	Commercial Energy Efficiency Measures (C-PACE Audits)	Enabling Measure							

Other outcomes from the implementation of the four measures

- Lower energy demand and residential/commercial energy expenditures
- Reduced energy bills for residents in low-income and disadvantaged communities, and throughout the state of Montana

[1] Beginning with the second semi-annual report, reporting will include detailed quantified benefits to low-income and disadvantaged communities, including changes in co-pollutant emissions, and provide updates on ongoing and planned community engagement.

- Reduced exposure to hazardous air pollution or unhealthy ambient air quality
- Enhanced level of community engagement, as measured by an increased number of ongoing actions to engage with organizations and residents of disadvantaged communities, and other interested parties
- Increased staff capacity to implement GHG reduction measures
- Increase in the number of high-quality jobs created throughout the applicant's jurisdiction and in low-income and disadvantaged communities; and/or,
- Increased resilience to climate change impacts as measured by the number of buildings or Census tracts that meet certain resiliency standards.
- Reduced duration and frequency of customer outages where grid resilience project is located;
- increased resilience of grid and critical community facilities to extreme weather events caused by climate change including but not limited to wildfires, extreme heat, and flooding;
- expanded economic development and job training opportunities for construction, operation, and maintenance of grid resilience projects;
- increased community engagement activities with communities on health, economic and environmental impacts of aging grid infrastructure in these communities.

Performance Measures and Plan

The DEQ has established the following performance measures to track progress concerning successful processes and output and outcome strategies:

Measure 1: School Energy Performance Initiative

- DEQ will require applicants to submit a project management plan in applications submitted for school energy performance subawards.
- DEQ will require subrecipients of school energy performance grants to submit quarterly and annual reports to the Third-Party Administrator that include data on tracking specific project progress and project benefits metrics.
- DEQ will also require subrecipients to meet with the Third-Party Administrator on a quarterly basis to discuss progress towards achieving benefits and milestones identified in the subrecipients project management plan.
- DEQ will evaluate results of this measure by requiring each subrecipient to submit a project results report to the Third-Party Administrator upon project completion that includes detailed and quantified pre and post project benefits. These benefits include but are not limited to energy savings, greenhouse gas reductions, resilience benefits, and other metrics identified in the subaward agreement.
- DEQ will track project communications of the agency and Third-Party Administrator, including media outreach, social media engagement, presentations to and meetings with stakeholder organizations.
- DEQ will quantify and verify GHG emissions and HAP/CAP emissions from school energy performance projects using existing publicly available quantification tools such as EPA's AVERT tool.
- DEQ will provide EPA with a status update with respect to each performance measure for the semi-annual reports and final reports.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

Through previous experiences with vehicle replacement projects funded by the EPA or Volkswagen Settlement, DEQ will use the following existing performance measures to track progress concerning successful processes, output, and outcomes strategies of the Fleet Vehicles measure:

- Select subrecipients through competitive request for applications process that outlines CPRG and DEQ eligibility requirements, project requirements, and deliverables.

- Enter into contract agreements with subrecipients that include roles and responsibilities for DEQ and the subrecipient. Contract agreements will align with EPA requirements and follow previous fleet conversion contract requirements used by DEQ.
- Deliverables including visual evidence of project completion will be required before rebate funds are released to the subrecipient.
- DEQ has project monitoring practices in place to ensure projects are completed within the contract period. If there is a good faith effort to meet the contract period timeline, DEQ has allowed extra time on a case-by-case basis.
- DEQ will track project communications, including media outreach, social media engagement, presentations to and meetings with stakeholder organizations.
- DEQ will comply with EPA reporting requirements including emissions reductions based on the vehicle being replaced. For EPA DERA-funded projects, DEQ has used the Diesel Emissions Quantifier tool but has also used the AFLEET tool for quantifying emissions reductions for Volkswagen Settlement-funded projects.

DEQ will provide a status update with respect to each performance measure to EPA in required reports and the final report.

Measure 3: Electric Grid Technology

DEQ has established the following performance measures to track progress concerning successful processes and output and outcome strategies of the Electric Grid Technology measure:

- DEQ will require applicants to submit a project management plan in applications submitted for grid resilience subawards.
- DEQ will require subrecipients of grid technology grants to submit quarterly and annual reports that include data on tracking specific project progress and project benefits metrics. These metrics will align with the outputs and outcomes identified in this application as well as metrics included in the existing formula grant funding.
- Metrics include but aren't limited to project construction installation milestones, customers impacted/benefitted from resilience projects and estimated GHG reductions from specific projects.
- DEQ will also require subrecipients to meet with the agency on a quarterly basis to discuss progress towards achieving benefits and milestones identified in the subrecipients project management plan.
- DEQ will require that subrecipients include a community outreach plan in their application that prioritizes outreach to low-income and disadvantaged communities.
- DEQ will evaluate results of this measure by requiring each subrecipient to submit a project results report one year after project completion that includes detailed and quantified pre and post project benefits. These benefits include but are not limited to greenhouse gas reductions, resilience benefits, utility customer impacts, and other metrics identified in the subaward agreement.
- DEQ will quantify and verify GHG emissions and HAP/CAP emissions from grid resilience projects using existing publicly available quantification tools such as EPA's AVERT tool.
- DEQ will track project communications, including media outreach, social media engagement, presentations to and meetings with stakeholder organizations.
- DEQ will provide EPA with a status update with respect to each performance measure for the semi-annual reports and final reports.
- Project communications, including media outreach, social media engagement, presentations to and meetings with stakeholder organizations.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

The MFFA has established the following performance measures to track progress concerning successful processes and output and outcome strategies of the C-PACE measure:

- Tracking and monitoring the number of energy audits and ITPR applications received, approved, processed, and completed.
- Upon completion, the MFFA will also follow up with the building owner and request updates to the project, inquiring if the energy efficiency improvements listed in the energy audit had been enacted.
- If a project had been completed, the MFFA will track the amount of CO_2 emission reduction the enabling measure helped to enact using the audit as a guideline.

The MFFA will track progress for each performance measure within its jurisdiction by utilizing a spreadsheet dedicated specifically to this enabling measure. The MFFA will provide the DEQ with a status update with respect to each performance measure for the semi-annual reports and final report.

Authorities, Implementation Timeline, and Milestones

Tables 10a and 10b identify the parties, roles, and responsibilities for implementing each GHG reduction measure and their respective authority to carry out the measure or plan for obtaining authority during the grant period. The overarching roles and responsibilities of each coalition member are detailed in section 1 of this proposal. A detailed implementation timeline – including tasks, key milestones, and key actions needed to meet measure goals and objectives by the end of the grant period – for each measure is provided in section 1.a of this proposal.

Table 10a. DEQ's Implementing Entities, Roles & Responsibilities and Legal Authority

Measure	Measure-Specific Roles and Responsibilities	Legal Authority
Measure 1: School Energy Performance Initiative	Establishing and administering the Energy Performance Contracting (EPC) program, including prequalification of Energy Service Providers	MCA 90-4-11 & MCA 20-9-471(3)
	Qualification of energy saving projects for public schools	
Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives	Administration of measure by existing DEQ staff including reporting requirements to EPA	Montana's transportation energy policy & alternative fuels policy; MCA 90-4-1010 & 90-4-1011. Implementation of this measure would be consistent with similar pass-through funding programs such as EPA's DERA state program.
	Drafting request for applications and contracts based on existing DEQ programs	
	Education, outreach, and technical assistance to fleets with a focus on Low-Income and Disadvantaged Communities (LIDACs)	
	Oversight of subrecipient awards to ensure compliance with CPRG program and DEQ contract requirements	
	Release of CPRG funds to subrecipients upon completion of project activities and deliverable requirements	
	Additional rounds of requests for applications dependent on availability of CPRG funding after initial funding to subrecipients	
Measure 3: Electric Grid Technology	Administration of measure by existing DEQ staff including reporting requirements to EPA	The U.S. Department of Energy's *Preventing Outages and Enhancing the Resilience of the Electric Grid Formula Grants to States and Indian Tribes Program* is authorized in section 40101(d) of the Infrastructure Investment and Jobs Act (IIJA). Governor Greg Gianforte designated
	Drafting request for applications and subaward agreements based on existing DEQ programs	
	Education, outreach to LIDAC communities	
	Monitoring subrecipient activities and adherence to community outreach plans	

	Oversight of subawards to ensure compliance with CPRG program and DEQ contract requirements	the Montana DEQ as the state entity eligible to administer funding under this program.

Table 10b. MFFA's Implementing Entities, Roles & Responsibilities and Legal Authority

Measure	Measure-Specific Roles and Responsibilities	Legal Authority
Measure 4	Administration of measure by existing MFFA staff including reporting to DEQ and EPA	The MFFA can enter into contracts under MCA 90-7-202. It is the administrator of the C-PACE Program under MCA 90-4-1303.
	Drafting grant program rules, applications and administrative guidelines in compliance with grant awards rules	
	Education, outreach to businesses in LIDAC communities	
	Monitoring grantee activities and ensuring completion of grant-funded audits	
	Oversight of subawards to ensure compliance with CPRG program and DEQ contract requirements	

3. LOW-INCOME AND DISADVANTAGED COMMUNITIES

Community Benefits

More than one-third (99) of Montana's 271 census tracts are considered "disadvantaged," according to the federal Climate & Economic Justice Screening Tool (CEJST) developed by the Council on Environmental Quality. These areas experience significant economic, health, and/or environmental burdens. A list of Montana's low-income and disadvantaged community (LIDAC) census tracts is included as an attachment to this application.

The implementation of the four measures included in this application is anticipated to provide significant benefits to the state's low-income and disadvantaged communities. DEQ and MFFA will assess, quantify, and report a more thorough analysis of associated community benefits based on actual data collected during implementation of these measures. The DEQ will include results of these assessments in semi-annual reports to EPA and make the information publicly available.

Measure 1: School Energy Performance Incentives

DEQ plans to make this program available to all Montana K-12 schools but will prioritize funding for high-need schools that serve low-income and disadvantaged communities, tribal schools, and Title 1 schools that serve low-income students. This would ensure that the highest need communities receive much-needed funds. Ultimately, this measure will benefit all Montana communities by investing federal funding in school infrastructure that otherwise may require local or state dollars.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

Prioritization of vehicle replacements and conversions in low income and disadvantaged communities will have the benefit of reducing local air quality impacts from the transportation sector, including the direct exposure of bus passengers to diesel exhaust. Implementation of this measure would also facilitate the deployment of innovative transportation technologies in low-income and disadvantaged communities, including associated operation and maintenance jobs.

Previous DEQ funding opportunities for vehicle replacements similar to this measure focused on reduction of NOx emissions, achieving long-term air quality benefits for the greatest number of Montanans, and reducing diesel emission exposure of sensitive populations using the Environmental Justice Index for diesel particulate matter. All successful applicants to this funding opportunity were located in communities completely or partially in low-income and disadvantaged communities as identified by the federal Climate and Economic Justice Screening Tool. The vehicles

include electric-powered school buses, transit buses, and street sweepers that serve entire communities including LIDAC and non-LIDAC neighborhoods.

Funding made available through this measure will include a focus on prioritizing LIDAC communities as well as ensuring GHG reductions. DEQ may use the EPA's Diesel Emissions Quantifier to measure reductions from specific details of vehicles to be replaced.

DEQ will assess, quantify, and report a more thorough analysis of associated community benefits based on actual data collected during implementation. DEQ will track the deployment of clean transportation fleet vehicles in and near identified LIDAC census tracts to quantify reduction in GHG emissions and co-pollutant emissions and other community benefits. The DEQ will include results of these assessments in semi-annual reports to EPA and make the information publicly available.

Measure 3: Electric Grid Technology.
Microgrid projects can help transform the economies of rural and underserved communities by allowing these communities to be more resilient, improving access to electricity, and supporting other critical sectors, including healthcare. Cleaner air reduces respiratory diseases, cardiovascular problems, and premature deaths associated with pollution. In addition, decarbonization requires substantial investments in transmission lines, substations, and grid infrastructure. These investments stimulate economic growth, as investments in smart grids, energy storage, and grid management technologies drive innovation and create jobs.

Grid upgrades also result in a reduction in frequency and duration of outages and reduces pollution by supporting electrification, increasing efficiency, and enabling integration of renewable energy. Grid resilience projects increase job training and employment opportunities in rural and underserved communities, and thus can bring benefits to communities that are in need of additional infrastructure investment such as Montana's most rural communities or those serving low-income communities.

DEQ will track the deployment of grid resilience projects in and near identified LIDAC census tracts to quantify reduction in GHG emissions and co-pollutant emissions and other community benefits.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)
The implementation of the enabling measure is anticipated to provide significant benefits to the whole state of Montana. Low-income and disadvantaged communities historically face a greater burden of the adverse effects of air, water, and soil pollution. In addition, businesses in those communities are more likely to be working in aging buildings in greater need of energy efficiency measures. By funding the required energy audits and ITPRs, more businesses throughout Montana can realize savings by installing energy efficiency actions identified in the audits that reduce energy consumption and costs. The MFFA has, through its own sources or in collaboration with partners, funded 27 audits to eligible non-profit healthcare facilities. With CPRG funds, the MFFA can provide eligible facilities with the ability to identify opportunities to reduce their CO_2 emissions.

The MFFA will assess, quantify, and report on the enabling measures which lead to more energy efficiency improvements on low income and disadvantaged communities. The MFFA will track the deployment of the enabling measures to quantify reduction in GHG emissions and co-pollutant emissions and other community benefits as they arise. The MFFA will include results of these assessments in semi-annual reports and make the information publicly available.

Community Engagement
Implementation of the four measures included in this application is anticipated to provide significant benefits to Montana's LIDACs, which are located throughout the state and in both rural and urban areas.

The DEQ intends to continue meaningful engagement with LIDACs throughout and following implementation. Examples of meaningful community involvement include, but are not limited to:

- Developing an outreach and engagement strategy; promoting the use of a wide variety of techniques to create early frequent, and continuing opportunities for community engagement
- Providing a publicly accessible list of all upcoming community engagement opportunities
- DEQ will conduct outreach to low-income and disadvantaged communities regarding the impacts, need, benefits and challenges of these projects
- Getting community feedback on local benefits and prioritizing what they value most
- DEQ will engage with utilities, electricity generators, fuel suppliers, local governments and other stakeholders, as it did to develop the application for current Grid Resilience Formula funds
- DEQ's objective is to meet Justice40 goals in administering grid resilience projects. Projects in LIDAC communities and communities vulnerable to electricity outages will be prioritized
- DEQ will host discussions with LIDAC communities to receive feedback on the projects. Methods of engagement may include in-person and virtual meetings, workshops, roundtable discussions, etc. These methods will be tailored to each community.
- DEQ will require subrecipients to engage with communities where the projects are located and have committed to ongoing community engagement throughout the project period.
- When scoring applications, DEQ will give additional points to projects that include innovative and inclusive approaches and a detailed plan for community engagement.

As described in the description for each measure included in this proposal, DEQ intends to continue meaningful engagement with LIDACs throughout and following implementation. The DEQ will also seek input from LIDACs during development of promotional materials, guidance, and other materials.

Although Montana's C-PACE program can be used at any size of project and in any community across the state, MFFA believes the best allocation of these grant funds is for energy efficiency projects that are likely to be smaller than $500,000 and in communities identified as rural, LIDAC or Justice 40. The MFFA will specifically focus its work on outreach and promotion to target projects in these communities. Energy audit and ITPR applications will be reviewed and approved by the MFFA team with priority towards commercial, agricultural, and multi-family projects in rural, low-income, and disadvantaged communities.

The MFFA has strong working relationships with lenders, contractors and economic developers who can help identify entities who may be interested in receiving energy audits and ITPRs to enact energy efficiency measures on their buildings. The MFFA will use its broad network of local economic development agencies, contractors and lending partners to inform businesses of the available funds and target LIDAC communities.

Funding to expand the enabling measure will allow us to engage these partners to improve buildings in. By implementing the enabling measure and embracing energy efficiency technologies, Montana building owners will reduce their greenhouse gas footprint.

Please see attached document containing letters of support from: the MT School Board Association, School Administrators of Montana, the City of Missoula, the City of Bozeman, Families for a Livable Climate, the Blackfeet Nation, Northern Plains Resource Council, IBEW Local 532 and IBEW Local 233.

4. JOB QUALITY

Measure 1: School Energy Performance Incentives

Designing and implementing energy projects at K-12 schools provides high quality jobs from start to end. Design engineering firms hire qualified and highly paid professional staff while construction contractors hire trades people who are paid and provided benefits according to Davis Bacon law. Additionally, the schools have the opportunity to contract with the consultant they consider to be the best fit for their project needs and can request consideration of contractors and their effect on the local economy.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

Through DEQ's collaboration with the Montana Department of Transportation on the National Electric Vehicle Infrastructure Program, DEQ has reached out to the Montana Electrical Training Center and electricians to encourage training through the Electric Vehicle Infrastructure Training Program (EVITP). Many federal funding sources require that charging infrastructure be installed by EVITP-certified electricians. The number of EVITP-certified electricians in Montana has increased based on monitoring of the EVITP website. DEQ will continue to encourage electrical contractors in Montana to seek EVITP certification so they can participate in federally funded electric vehicle-related projects. Because this measure primarily focuses on purchasing new zero-emission vehicles, there will be minimal changes to job quality or numbers. However, encouraging electricians, mechanics, first responders, and vehicle operators to get the training they need to safely operate and maintain zero-emissions vehicles by Montana-based workers will continue to be an important message from DEQ.

Measure 3: Electric Grid Technology

Projects must comply with Davis-Bacon and meet prevailing wage requirements. Job training and education associated with grid resilience projects will be an eligible expense for funding. Projects will be assessed based on whether they meet the objective to increase skilled workforce in Montana. DEQ will require subrecipients to report on number of people trained and employed to install, operate and maintain grid resilience projects. The transition to clean energy creates employment opportunities in manufacturing, installation, maintenance, and research. Skilled workers are needed for solar panel installation, wind turbine maintenance, and grid development. Decarbonization requires substantial investments in transmission lines, substations, and grid infrastructure. These investments stimulate economic growth.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

Under C-PACE program guidelines the audits are to be completed by Qualified Energy Engineer, that being defined as a professional holding one or more of the following certifications: Building Energy Assessment Professional, Building Energy Modeling Professional, Certified Energy Manager, Certified Measurement and Verification Professional, Certified Energy Auditor, Certified Commissioning Professional, Certified Commissioning Authority, Building Commissioning Professional Certification. Grant funding will increase the engagement of those with the listed certification and may increase demand for those people trained to take those positions.

5. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

DEQ has successfully implemented other federal grants within its jurisdictions. Federally funded and non-federally funded assistance agreements that DEQ's Energy Bureau are performing or has performed within the last three years include the following:

Measure 1: School Energy Performance Incentives

CPRG funding would complement and could leverage several other existing federal funding opportunities, multiplying the impacts:

- State Energy Program
  - Funding Agency: Department of Energy
  - Description: Base funding grant from DOE to DEQ to fund a variety of energy work including SMART Schools, energy code, energy performance contracting, and technical assistance to local governments and schools.
  - Status: On-going annual grant
- State Energy Program IRA Expanded
  - Funding Agency: Department of Energy
  - Description: Additional IRA funding grant from DOE to DEQ to fund a variety of energy work including technical assistance to local governments and schools and energy innovation projects.
  - Status: On-going annual grant

Additionally, in-kind state funding will be dedicated to a portion of activities related to elements of Energy Performance Contracting.

Measure 2: Strategic Conversion of Fleet Vehicles to Cleaner Alternatives

- Clean School Bus Program
  - Funding Agency: DEQ Energy
  - Description: Applications from school districts or K-12 schools in Montana for matching funding to replace model years 1996-2019 diesel-powered C and D type school buses with new, battery-electric school buses or school buses with low NOx engines and to replace model years 1996-2009 diesel-powered C and D type school buses with gasoline, propane, or cleaner diesel buses.
  - Status: Project activities are complete and DEQ Energy is working to close grant with EPA.
- Clean Truck, Bus & Airport Equipment Program
  - Funding Agency: DEQ Energy
  - Description: Applications from public and private entities to replace medium- and heavy-duty buses and trucks as well as airport ground support equipment per the requirements of the Volkswagen Diesel Emissions Settlement. New diesel, alternative fuel, or electric vehicles were eligible for funding except for school buses and airport equipment. DEQ awarded $5.45 million to fund 11 electric school buses, two electric street sweepers, three electric airport belt loaders, and one electric airport pushback tractor.
  - Status: Of the 17 contracts signed with six entities, eight of the contracts are closed with all project activities completed. Nine contracts with two entities were extended due to supply chain issues affecting delivery of the vehicle replacements but DEQ anticipates completion of all projects in 2024.
- Electric School Bus Technical Assistance Project
  - Funding Agency: DEQ Energy
  - Description: DEQ contracted with VEIC to provide technical assistance to six Montana school districts/fleet operators that were bringing the first electric school buses to Montana. Three of the entities were funded by DEQ with Volkswagen Settlement funds and three were funded by EPA's Clean School Bus program. Technical assistance included route planning, charging planning, cost tracking, and comparisons with diesel school bus costs and efficiency.
  - Status: The work with the districts/fleets will finish at the end of the 2023-24 school year. VEIC will draft a final report that DEQ hopes to make publicly available by the beginning of the 2024-25 school year.

Measure 3: Electric Grid Technology

- Grid Resilience State and Tribal Formula Grant Program

- Funding Agency: U.S. Department of Energy
- Description: Purpose is to distribute funding to states, territories and federally recognized Indian Tribes to strengthen and modernize America's power grid against wildfires, extreme weather, and other natural disasters.
- Status: DEQ has received first two years of formula funding in August 2023. DEQ plans to issue first subawards under this program by November 2024.

Measure 4: Energy Efficiency (C-PACE Audits & ITPRs)

The MFFA successfully funded, implemented and monitored an energy audit grant program which resulted in 27 energy efficiency audits for nonprofit healthcare facilities. The grants were both state funded and internally funded, specifically targeted towards rural and urban healthcare facilities.

- Description: grant program which paid for ASHRAE level 2 energy audits performed by engineers for healthcare facilities.
- Status: The grant program was sunset after the allotted funds were expended and when COVID-19 disrupted access to facilities.

Some examples of the facilities that received energy audits include:

- St. Patrick's Hospital in Missoula, Montana: By performing basic maintenance and changing its air handler mechanical systems that the audit identified, the hospital was able to recognize a savings of $160,000 per year and over 1.75 million kWh saved annually.
- Roosevelt Memorial Medical Center in Culbertson, Montana: The facility was experiencing higher than average heating costs due to aging and inefficient air handlers and heaters. By switching to a more energy efficient system, the facility was able to annually save over $12,000 and 195,500 kWh.

Staff Expertise

The DEQ is an agency of the state of Montana with expertise in Montana's energy system, electric system, transmission, distribution, energy resource planning, energy performance contracting, and energy efficiency projects in state-owned buildings as well as in funding the deployment of measures included in this application. DEQ has extensive experience with managing new funding programs and ensuring compliance with applicable project requirements. DEQ's Energy Bureau is the state's lead for Emergency Support Function-12 (ESF-12) and maintains Montana's Energy Security Plan. Additionally, the Energy Bureau participates in various transmission and electric system planning efforts in the state and region.

DEQ intends to build each of the proposed CPRG projects off of existing programs to ensure projects are started and completed in timely manner, in part to ensure that emission reductions are realized as soon as possible. DEQ program, legal, and procurement staff have experience with developing, executing, and managing federal funding opportunities. Previously successful DEQ funding opportunities can be efficiently updated to fit new CPRG programs, and quickly implemented by existing staff. Biographies of key DEQ and MFFA staff charged with overseeing the implementation of the measures in this application are attached.

The MFFA is the state-wide administrator for Montana's C-PACE. In 2021, the Montana Legislature passed the C-PACE Act, naming the MFFA as the statewide administrator for Montana's C-PACE program, expanding its focus from strictly rural healthcare into energy efficiency, renewables, and water conservation projects for Montana businesses. The MFFA staff have over 35 years of combined experience in capital financing in rural communities and for complex projects.