



**AMERICAN RECOVERY AND REINVESTMENT ACT of 2009
FUNDING FOR STATE CLEAN DIESEL GRANT PROGRAM**

National Clean Diesel Campaign

WORK PLAN NARRATIVE AND BUDGET NARRATIVE TEMPLATE

INSTRUCTIONS: The following template provides States with the information that should be included in the work plan and budget narrative submitted for the *Recovery Act Funding for the State Clean Diesel Grant Program*.

SUMMARY PAGE (1-2 pages)

Project Title: Georgia School and Transit Bus Retrofit Expansion

Project Manager and Contact Information

| | |
|-------------------|--|
| Organization name | Georgia Environmental Protection Division |
| Project manager | William Cook |
| Address | 4244 International Pkwy., Ste. 134, Atlanta, GA 30354 |
| Phone | 404-363-7031 |
| Fax | 404-362-2534 |
| Email | William.cook@dnr.state.ga.us |

Project Budget

| | |
|----------------|----------------|
| EPA allocation | \$1,730,000.00 |
|----------------|----------------|

Project Period

All work plans for the Recovery Act Funding for the State Clean Diesel Grant Program will run from the date of award through September 30, 2010. States should develop and submit a work plan and budget to their EPA Regional office. All activities should focus on stimulating the American economy, preserving and/or creating jobs, and reducing diesel emissions.

Summary Statement

Insert a brief paragraph summarizing the proposed project.

The State of Georgia's Environmental Protection Division (EPD) will expand the Georgia School and Transit Bus Retrofit Program with funding from the American Recovery and Reinvestment Act (ARRA) of 2009 State Clean Diesel Grant Program. Past activities for the school bus retrofit projects include the early implementation of ultra low sulfur diesel fuel, the use of biodiesel, and the installation and use of emission control devices. To date, 1,084 school buses have been retrofitted with an array of emission control devices including diesel oxidation catalysts, partial flow through filters, diesel particulate filters, and crank case filters. A majority of the previous retrofits have been installed on school buses in existing nonattainment counties.

The planned focus of activities for the State Clean Diesel Grant Program will be the retrofitting of school and transit buses in Georgia. EPD will open the definition of retrofit to include not only the installation of emission control devices but also repowering and replacing school and transit buses and rebuilding school and transit bus engines. EPD will implement projects that are determined to be cost.

The majority of the DERA funding will be used to pay for retrofitting school and transit buses. However, fifteen percent or less will be used for the administrative costs of overseeing this program. Any emission control devices, engines, or vehicles purchased and/or installed as a part of this project will be EPA or CARB verified and/or certified. The school and transit systems will have the opportunity to competitively bid on this project. The State has already received positive feed back from school systems and the Department of Education, and they are willing to partner with EPD.

This project will have a positive impact in creating and/or sustaining jobs. For example, a minimum of 35 man-hours are needed just to manufacture emission control devices. Two to six man-hours are needed per emission control device for installation. Over 20 people are involved in some capacity with every retrofit project.

SCOPE OF WORK

Project Description

Check the appropriate boxes and fill out the appropriate narrative sections to identify the activities that will be performed with the funds provided. This section should include a 2-3 page description of the State's plan to develop and implement grants that are appropriate to meet State needs and goals relating to the reduction of diesel emissions, including a description of the tasks and activities that will be conducted to accomplish this goal.

Technology options:

Retrofit Technologies: A "retrofit" project is defined broadly to include any technology, device, fuel or system that when applied to an existing diesel engine

achieves emission reductions beyond what is currently required by EPA regulations at the time of the engine's certification. A list of EPA verified technologies is available at <http://www.epa.gov/otaq/retrofit/verif-list.htm>. A list of CARB verified technologies is available at <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>.

- i. **Exhaust Controls:** Exhaust Controls include pollution control devices installed in the exhaust system (such as oxidation catalysts and particulate matter filters), or systems that include crankcase emission control (like a closed crankcase filtration system).

- ii. **Idle Reduction Technologies:** An idle reduction project is defined as the installation of a technology or device that (a) is installed in one or more of the following vehicle(s) or equipment: a bus; a medium-duty or heavy-duty truck; a marine engine; a locomotive; or a non-road engine or vehicle used in construction, handling of cargo (including at a port or airport), agriculture, mining, or energy production, or is installed in the ground and (b) is designed to provide services (such as heat, air conditioning, and/or electricity) to vehicles and equipment that would otherwise require the operation of the main drive engine while the vehicle is temporarily parked or remains stationary, and (c) reduces unnecessary idling of such vehicles or equipment. The reduction in idling must also lower emissions. EPA has verified a number of categories of idle reduction technologies: (1) auxiliary power units and generator sets; (2) battery air conditioning systems; (3) thermal storage systems; (4) electrified parking spaces (truck stop electrification); (5) fuel operated heaters; (6) shore connection systems and alternative maritime power. See <http://www.epa.gov/cleandiesel/idle-ncdc.htm> for more information.

- iii. **Cleaner Fuels Use:** Cleaner fuels include, but are not limited to, ultra-low sulfur diesel fuel (for non-road vehicles/engines prior to EPA's mandate), biodiesel, diesel emulsions or additives verified by EPA or CARB, compressed natural gas and other alternative fuels. Funding available under this program may be used to cover the cost differential between the cleaner fuel and conventional diesel fuel. Note: This funding may not be used for fueling infrastructure, such as that used for the production and/or distribution of fuels.

Engine Upgrades: An engine upgrade is defined as an engine that is rebuilt or remanufactured to meet higher federal emission standards. Some engines may be able to be upgraded to reduce their emissions by applying manufacturer recommended upgrades (or kits) to certified or verified configurations. It is recommended that funding be applied only to the emissions-reducing upgrade kit and associated labor costs for installation.

Note: Both Engine Repowers and Vehicle and Equipment Replacements require that the engine or vehicle being replaced be scrapped or rendered permanently disabled. For more information and requirements on scrapped or disabled engines/vehicles, contact your EPA Regional office.

Certified Engine Repowers: Repower refers to the removal of an existing engine and its replacement with a newer or cleaner engine that is certified to a

more stringent set of engine emissions standards. Repowers may include diesel engine replacement with an engine certified for use with a cleaner fuel (such as compressed natural gas or propane). These projects can also include the replacement of nonroad engines with highway engines if vehicles/equipment continues to perform the same function as before the repower.

- ☒ ***Certified Vehicle and Equipment Replacements:*** Non-road and highway diesel heavy-duty vehicles and equipment can be replaced under this program with newer, cleaner vehicles and equipment that operate on diesel or alternative fuels and meet a more stringent set of engine emissions standards. Replacement projects can include the replacement of diesel vehicles/equipment with newer, cleaner diesel or hybrid or alternative fuel vehicles/equipment. The replacement vehicle/equipment must be of the same type and similar gross vehicle weight rating or horsepower as the vehicle/equipment being replaced (e.g., a 300 horsepower bulldozer is replaced by a bulldozer of similar horsepower). The replacement vehicle/equipment must perform the same function as the vehicle/equipment that is being replaced (e.g., an excavator used to dig pipelines would be replaced by an excavator that continues to dig pipelines). These projects can also include the replacement of non-road vehicles/equipment with highway models if the highway models are capable of performing the same functions as the nonroad models. EPA encourages the replacement of older vehicles/equipment containing engines that were manufactured prior to the implementation of emissions standards.

EPD Project Description:

The project description is being inserted here since one or more of the options checked may be included in the Georgia School and Transit Bus Retrofit Expansion project. The Georgia Environmental Protection Division is submitting this project for funding as a part of its plan to reduce particulate emissions, hydrocarbons, and carbon monoxide from school and/or transit buses in Georgia. This project will significantly reduce emissions from Georgia's school and/or transit buses, which will in turn improve regional and local air quality and will increase and/or sustain jobs. In this project, EPD will work with several partners on a number of different initiatives to reduce emissions from diesel engines through an expanded voluntary retrofit program. Retrofits include the installation of emission control devices, early replacement of school and transit buses, rebuilding of school and transit bus engines, and repowering of school and transit buses. This project will fund 100% of the cost for purchasing and installing emission control devices, and rebuilding school and/or transit bus engines. It will cover approximately 25% of the cost of replacing a bus early and up to 75% of repowering.

School and transit systems in Georgia have shown a willingness to work with EPD to buy the lowest emitting diesel buses and retrofitting their existing buses with emission control devices. EPD has received funding from several sources to retrofit school buses. All of the previous retrofit projects have exclusively paid for the purchase and installation of emission control devices. School systems located outside of the non-attainment area have not had many opportunities to apply for grant assistance in retrofitting their buses. As a result this project will be open to all public

school and transit systems within Georgia that own and operate a diesel bus fleet. For the purposes of this application, EPD is estimating between 181 to 240 buses will be retrofitted. The range in the number of buses is dependent on the type of retrofit. The number of actual retrofits may be above or below the range. Based on the estimated range of buses that will be retrofitted, EPD anticipates entering into subgrants with 4 to 6 school and/or transit systems.

EPD plans to initiate and complete the following actions as specified below within the grant period of April 2009 through September 30, 2010:

- Amend EPD's Grants Program, Chapter 391-3-21, in accordance with Georgia's Fair and Open Grants Act: April - May 2009
- Develop solicitation for Georgia school and transit systems to retrofit 181 to 240 buses with Environmental Protection Agency (EPA) or California Air Resources Board (CARB) verified or certified emission control devices, purchase buses, and/or purchase engines: April through June 2009
- Send out solicitation: June 2009
- Evaluate all of the proposals and select the school and/or transit systems that will receive funding: July 2009
- Enter into agreements with the selected systems: July – November 2009
- Initiate outreach program to develop agreements with school and/or transit systems to retrofit buses if EPD does not receive enough qualified applications to use all of the funds during the solicitation period: July 2009 - December 2009
- Procure and install retrofit devices, purchase buses, and/or purchase engines for the selected projects: September 2009 - September 2010
- Submit quarterly reports and final report to EPA: July 2009 – October 2010
- Receive information for EPA quarterly reports and final report from selected systems: July 2009 through October 2010
- Receive and complete all invoicing by September 30, 2010

- Other: If the project will include emerging technologies not covered by the above list, please provide information below describing the technologies/approaches. See <http://www.epa.gov/cleandiesel/prgemerg.htm> for more information.

| |
|----------------|
| Not Applicable |
|----------------|

- Other: If the project will include non-technology approaches (e.g., operational strategies) not covered by the above list, please provide information below describing the technologies/approaches.

Not Applicable

Fleets that will be impacted with the technologies (check all that apply):

- School Buses
- Transit Buses
- Medium Duty Truck
- Heavy Duty Truck
- Marine Engine
- Locomotive
- Construction
- Cargo Handling
- Agriculture
- Mining
- Energy production
- other: (please describe)

Administrative Activities

Please provide a summary of any administrative activities that are funded under this work plan. States may spend up to 15% on administrative activities.

Georgia EPD will use \$162,189 on administrative expenses. This represents 9.4% of the total requested funding. Seven full-time positions and one part-time position will be partially funded under this grant to develop and implement the Georgia School and Transit Bus Retrofit Expansion Project. The positions will include an environmental specialist, environmental engineer, and unit manager with the Fuels & Engines Unit (Engines Unit), the Program Manager of the Mobile & Area Sources Program, a full-time and a part-time grants specialist and unit manager with the Financial Unit, and the Program Manager of the Planning & Support Program.

The Engines Unit manager will be responsible for coordinating the implementation of the retrofit program. The Engines Unit manager will direct tasks to the environmental specialist and environmental engineer and will assist in education, outreach, and review. The Engines Unit manager will also take the lead in meeting Georgia's Fair and Open Act requirements. The environmental specialist will be responsible for developing the sub-grant solicitation and sending it to potential sub-grantees. The environmental specialist will educate school and transit systems about the grant opportunity. The environmental specialist and environmental engineer will also be responsible for evaluating the applications that are submitted under the sub-grant and will ensure that memorandums of agreement are put into place for each of the selected applicants. The environmental specialist and environmental engineer will review all of the invoices that are submitted by the sub-grantees and will provide follow up to ensure that the scope of services and terms and conditions of the MOAs are being met.

The Financial Unit manager will direct the tasks of the grants specialists, review all documents prior to finalization, ensure that actions, including reporting requirements, are completed within the project timeline, and will manage the budget of the project. The full-time and part-time grant specialists will be responsible for finalizing memorandums of agreement (MOA) and sending them to sub-grantees. The grants specialists will process all of the invoices received and ensure payments are made. The grant specialists also will assist in assuring that the terms and conditions of the grant are being met.

The Mobile & Area Sources Program Manager will manage the activities of the Engines Unit staff assigned to this project and will direct the education and outreach aspects of this project. The Planning & Support Program Manager will manage the activities of the Financial Unit staff assigned to this project, oversee management of the budget, and coordinate compliance with Georgia's Fair and Open Act requirements. Both program managers will direct the overall activities of the project and ensure coordination between programs, review documents prepared by staff associates prior to finalization, and coordinate activities with the Air Protection Branch Chief, EPD's Director's Office, and U.S. EPA.

The Engines Unit environmental specialist, environmental manager, and unit manager will take advantage of workshops and conferences to keep up with the latest developments on emission reductions for diesel engines and will present at conferences and other events as opportunities develop to provide education and outreach to the targeted audience for this grant. The Financial Unit Manager and the program managers may also participate in some of these workshops and conferences as appropriate. Some of those opportunities include, but are not limited to, the Diesel Engine Emission Reduction Conference, the Clean Heavy-Duty Vehicle Conference, the Georgia Association for Pupil Transportation Conference, Alternative Fuel Vehicle Institute Conference, and SEDC Workshops / Events. The travel portion of the budget is estimated at \$13,000 and would be used to send one or more associates to events like those mentioned above. The travel budget is estimated by assuming that two associates attend certain known conferences and workshops.

Timeline

States should provide a time-line or schedule of expected target dates, milestones, and completion dates to achieve specific tasks and accomplishments during the budget and project period.

| Date | Activity |
|---|-----------------------------|
| Amend EPD’s Grants Program, Chapter 391-3-21, in accordance with Georgia’s Fair and Open Grants Act | April - May 2009 |
| Develop solicitation for Georgia school and/or transit systems to retrofit 181 to 240 buses with Environmental Protection Agency (EPA) or California Air Resources Board (CARB) verified or certified emission control devices, engines, and/or fuels | April through June 2009 |
| Send out solicitation | June 2009 |
| Evaluate all of the proposals and select the school and/or transit systems that will receive funding | July 2009 |
| Enter into agreements with the selected systems | July – November 2009 |
| Initiate outreach program to develop agreements with systems to retrofit buses if EPD does not receive enough qualified applications to use all of the funds during the solicitation period | July 2009 – Dec. 2009 |
| Subgrantees procure and install a minimum of 50% of retrofit devices and/or purchase 50% of buses/engines for the selected projects | Sept. 2009 - March 2010 |
| Sub-grantees procure and install remaining retrofit devices and/or purchase remaining buses/engines for the selected projects | April – September 2010 |
| EPD staff will inspect purchases/installations | Sept. 2009 – September 2010 |
| EPD will submit quarterly reports to EPA | July 2009 – July 2010 |
| EPD will receive information from selected school and/or transit systems for EPA quarterly reports and final report | July 2009 – July 2010 |
| Ensure all invoicing has been submitted and processed | September 30, 2010 |
| EPD will draft final report and submit to EPA | September – October 2010 |

Program Priorities

The State Program will ensure that the programmatic priorities listed below as outlined in the Energy Policy Act of 2005, Subtitle G will be met to the extent practicable:

1. Maximize public health benefits;

By retrofitting school buses, this project will protect the health of one of the most susceptible age groups, children. However, they are not the only ones to

benefit from the reduction of emissions from buses. Bus drivers, mechanics, teachers and school administrators also benefit from reduced exposure to diesel exhaust. School and transit buses travel through residential areas. By reducing emissions from these buses, we are also reducing PM levels in our local communities.

2. Are the most cost-effective;

The installation of emission control devices have been found to be one of the most cost effective ways to reduce emissions from the existing diesel fleet. EPD is now exploring other retrofit options such as engine upgrades, repowering, and bus replacement and evaluating their cost effectiveness. In this project, EPD will evaluate proposals to ensure that cost effective strategies to reduce diesel emissions are being employed.

3. Are in areas with high population density, that are poor air quality areas (including nonattainment or maintenance of national ambient air quality standards for a criteria pollutant; Federal Class I areas; or areas with toxic air pollutant concerns);

This project will be open to any public school and transit system in Georgia. School bus diesel emissions affect one of the nation's most sensitive populations, our children. Each school bus is a potential "hot spot" for particulate matter whether the bus travels in an attainment or nonattainment county. This project will ensure that Georgia is putting its children, bus drivers, teachers, and many others on the safest and cleanest transportation available. Transit bus emissions affect a wide range of the state's population from young children to senior adults, and transit buses often travel through the most congested parts of the state. Emission reductions from these buses will reduce ambient concentrations on the bus and the communities in which they travel.

4. Are in areas that receive a disproportionate quantity of air pollution from diesel fleets, including truck stops, ports, rail yards, terminals, and distribution centers or that use a community-based multi-stakeholder collaborative process to reduce toxic emissions;

School and transit buses subject children, adult passengers, drivers, and other school and transit system staff to a disproportionate quantity of air pollution. A 2003 study conducted by the California Air Resources Board concluded that school buses "appear to expose them [students] to significantly higher concentrations of vehicle-related pollutants than ambient air concentrations and frequently higher concentrations than those measured on roadways." Schools are also subject to higher concentrations of particulates due to the unloading and loading of the school buses and individual vehicles on site. The conclusions found in the school bus study can also be applied to transit buses. This project targets the school and transit bus directly by reducing pollutants from existing engines.

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

This project will require that selected school and transit systems purchase retrofits that are or will be certified or verified by the U.S. Environmental Protection Agency or California Air Resources Board. In the case of early bus replacements, the new school and transit buses must meet CARB heavy-duty engine standards for the applicable model year. Emission control technologies must be listed on the EPA or CARB verified technology website or be in the process of being listed. Emission control technologies will only be applied to buses with 4 years or more of remaining service, and new school buses have an average life of 15 years in most Georgia school bus fleets.

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

School and/or transit systems selected for award under this sub-grant will be required to maintain the retrofit as necessary and to pursue any defects under the manufacturer's warranty if they arise. Properly maintaining the emission control devices and/or new buses will maximize the useful life and function of the retrofit.

7. Conserve diesel fuel; and

Any school and/or transit system that EPD partners with to retrofit their fleets are required to have an anti idling policy. This policy not only extends the life of the bus engine and the emissions control equipment, it also reduces the amount of fuel used.

8. Utilize ultra low sulfur diesel (ULSD) fuel (15 parts per million of sulfur content) ahead of EPA's mandate (for nonroad projects).

Most, if not all, school and transit systems in Georgia currently use ULSD in their bus fleets. The memorandums of agreement with the selected systems for this grant will either contain a provision requiring the use of ULSD in the retrofitted buses or will be inherent in the maintenance of the retrofit.

- The State will ensure that, per the Recovery Act, grant activities preserve and/or create jobs and promote economic recovery. The State should also commence expenditures and activities as quickly as possible consistent with prudent management when implementing this grant and/or loan program.

With the man-hours needed to engage in retrofit projects, EPD expects this project to create jobs in EPD, school and/or transit systems, manufacturers, installers, maintenance staff, and repair staff. A typical retrofit program requires the manufacturing of a product, installation and/or delivery of the product, maintenance and repair of the product, and oversight of the project. According to an economic impact study

performed by Keybridge Research LLC in December 2008 (<http://www.ectausa.com/documents/DERAEconomicImpactStudy.pdf>), the auto parts manufacturing industry and auto repair/maintenance industry will gain 18.0 and 26.3 jobs, respectively, for every \$1 million of final grant expenditures. For retrofit projects, 90% of the cost of a retrofit is in manufacturing, and the remaining 10% goes toward installation. Assuming Georgia dedicates \$1,567,811 for diesel engine retrofits, it could be estimated that implementation of this grant program will create/preserve approximately 29 total jobs in manufacturing, repair, and maintenance (25.4 for the auto parts manufacturing industry to manufacture the retrofit devices and 4.12 for the auto repair/maintenance industry to install and maintain those devices).

In addition to the staff that would be employed by the manufacturers and other service companies, EPD would also partially sustain eight positions in the development and administration of this grant. These 8 positions will equate to creating/preserving 2 full time jobs.

- ☒ The State Program understands that all proposals must support Goal 1 of EPA's 2006-2011 Strategic Plan, Clean Air and Global Climate Change; Objective 1.1: Healthier Outdoor Air, which states, "Through 2011...[EPA will]...protect human health and the environment by attaining and maintaining health-based air-quality standards and reducing the risk from toxic air pollutants." See <http://www.epa.gov/cfo/plan/plan.htm> for more information on EPA' Strategic Plan.

The following outputs and outcomes demonstrate how this project supports Goal 1 of EPA's Strategic Plan ...

Outputs

This project proposes to retrofit between 181 to 240 buses. This project is expected to yield an 85% - 90% reduction in PM when CARB level three emissions control devices or new buses are used and 50% reduction in PM when level two devices are used. Retrofit devices used in this project will be EPA and/or CARB certified or verified. EPD has not attempted to quantify every possible retrofit scenario. Based on past experience and using current school bus fleet data, EPD staff has quantified the potential reductions as if all of the funds awarded were for emission control devices such as partial flow through filters and diesel particulate filters for installation on school buses. Similar emission reductions would be expected if all of the buses retrofitted were transit or a mix of school and transit. The estimates are included in the table below. The lower range for the pollutants reduced and upper range of the cost effectiveness is based on a scenario where all of the school buses (181 buses) are equipped with partial flow through and crank case filters. The upper range for the pollutants reduced and lower range for the cost effectiveness are based on all of the sub-grantees installing diesel particulate and crank case filters on their school buses (240 buses). The emission estimates were calculated using the EPA Diesel Emissions Quantifier. Any other retrofit such as the early replacement of school and/or

transit buses, engine replacement, or repowering would yield emission reductions within the range specified below and have a similar range in cost effectiveness.

| Pollutants | Total Emission Reductions tons/yr | Total emission reductions over project life – tons per project life | Cost-effectiveness in dollars per ton based on 10 year project life (\$ / ton) |
|---------------------------|--|--|---|
| Particulate Matter | 0.20 – 0.29 | 3.16 – 4.48 | \$324,777- \$460,443 |
| Carbon Monoxide | 3.43 – 3.87 | 52.68 – 59.59 | \$24,417 - \$27,105 |
| Hydrocarbons | 0.75 – 0.84 | 11.60 – 12.97 | \$112,182- \$125,431 |

EPD does not expect the installation and use of emission control devices, replacement of older buses early, or the repowering/rebuilding of engines to significantly reduce carbon dioxide (CO₂) emissions. However, as a part of the memorandum of agreements with selected school and/or transit systems, idle reduction policies will have to be in place. If the selected systems have idle reduction policies already in place, no additional CO₂ reductions would occur as a result of this project. Reductions will only be realized in systems that do not already have idle reduction policies.

EPD will track retrofits employed by this project to ensure that the emissions control devices and/or new buses remain in use and are maintained as needed. EPD and the local community have a vested interest in assuring that the emission reductions are achieved over the lifetime of the buses. Specifically, EPD will enter into memorandum of agreements with the selected school and/or transit systems in order to provide a mechanism for reimbursing the system for retrofitting an agreed upon number of buses. The agreement will require that the system notify EPD when the buses will be retrofitted so that staff can inspect the retrofit. EPD currently follows up with school systems that have retrofitted their vehicles to ensure that the devices continue to work properly and as designed and will include the selected school and/or transit system(s) for this project in these reviews.

Outcomes

EPD expects to have short-term, mid-term, and long-term outcomes from this project. The specific outcomes of this project will be improved regional and local air quality and decreased pollutants in the school and/or transit bus cabin through the employment of diesel retrofits. Although the primary purpose of the retrofits are to reduce particulates, certain retrofit technologies, including certain exhaust control technologies, engine upgrades, certified engine repowers, and certified vehicle and engine replacements, also reduce emissions of nitrogen oxides, which can curtail the production of ozone and help to ensure that regions in the state remain in or attain compliance with the NAAQS for ozone.

The short-term outcome is to expose fleet managers outside metro Atlanta and Macon to retrofit strategies. The more familiar that transportation directors become with the various technologies, the more likely that they are to enter into projects to retrofit their buses. A number of school systems in metro-Atlanta and Macon have been successful in retrofitting their buses. EPD desires to illustrate that these retrofit projects can be successful everywhere in Georgia and can be successfully deployed to help regions attain air quality goals.

Mid-term outcomes include the emission reductions resulting from selection and implementation of this project, which will be calculated based on the specific emission control technology chosen. EPD will track the installation of the hardware and/or purchase of a new bus or engine and will gather feedback on the use and maintenance of the technology. The experience gained in the project will be used to determine the success in retrofitting the remaining fleet and will assist other school and/or transit bus fleets in retrofitting their buses.

The long-term outcome will be healthier children served by the project who will turn into healthier adults as a result of being exposed to less PM2.5 and other toxic pollutants. This project will not measure the long-term outcomes. However, many studies have linked the negative health effects of breathing-in particulate matter. Children are much more susceptible to pollutants due to their smaller airways, higher rate of air intake, and faster metabolisms. To add to this, children that ride school buses are exposed to much higher concentrations of PM2.5 and toxics. Their increased susceptibility and exposure increase the chances that the children who ride buses without emission controls will develop breathing problems. This project will ensure that the children riding the retrofit buses will be exposed to much less particulate matter and air toxics and as a result will have a higher chance of leading much healthier lives.

- Check this box if the proposed project involves environmentally related measurements or data generations that would need quality assurance and quality control plans and procedures as pursuant to 40 CFR 31.45.

Reporting

- The State Program understands that reporting will at least be quarterly and additional reporting may be required for these special Recovery Act grants. Reporting requirements will be detailed in the grant Terms and Conditions.

BUDGET NARRATIVE (1-2 pages)

Project Budget

States should provide a detailed itemized budget (in addition to the Standard Form 424A) using the table below:

| Budget Category | EPA Allocation |
|--|-----------------------|
| 1. Personnel | \$112,119 |
| 2. Fringe Benefits | \$37,070 |
| 3. Travel | \$13,000 |
| 4. Supplies | |
| 5. Equipment | |
| 6. Contractual | |
| 7. Other – Anticipate awarding 4 to 6 sub-grants | \$1,567,811 |
| Total Direct Charges | \$1,730,000 |
| 8. Indirect Charges | |
| Grand Total | \$1,730,000 |

Explanation of Budget Framework

States must demonstrate that no more than 15 percent of a State's total allocation from EPA is being used to cover administrative type costs as identified in OMB Circular A-87 Attachment B (e.g., personnel, benefits, travel, supplies) The 15 percent maximum does not include indirect cost rates or funds going directly to projects through grants and/or loans.

1. Personnel

Indicate salaries, percentage of time assigned to the project and total cost for budget period, by job title of all individuals who will be supplemented with these funds.

| Category | EPA |
|---|------------|
| Engines Unit Environmental Specialist, 40% @ 3256/mo x 17 mo | \$22,138 |
| Engines Unit Environmental Engineer, 10% @ \$5450/mo x 17 mo | \$9265 |
| Engines Unit Manager, 20% @ \$5854/mo x 17 mo | \$19,905 |
| Mobile & Area Program Manager, 10% @ \$5406/mo x 17 mo | \$9191 |
| Grants Specialist, 30% @ \$2964/mo x 17 mo | \$15,116 |
| Financial Unit Manager, 20% @ \$5035/mo x 17 mo | \$17,118 |
| Planning & Support Program Manager, 10% @ \$7052/mo x 17 mo | \$11,988 |
| Part Time Grants Specialist, 40% of 64 hr/mo @ \$17/hr x17 mo | \$7398 |
| Total | \$112,119 |

2. Fringe Benefits

Fringe benefit costs are those costs for personnel employment other than the employees' direct income (i.e., employer's portion of FICA insurance, retirement, sick leave, holiday pay, and vacation cost) that will be paid by the grantee. Provide the total cost of fringe benefits unless treated as part of an approved indirect cost rate. Provide break-down of amounts and percentages that comprised fringe benefit costs, such as health insurance, FICA, retirement insurance, etc. Indicate all mandated and voluntary benefits to be supplemented with these funds.

| Category | EPA |
|---|------------|
| FICA – Regular, Full-Time Positions, 5.7% x \$104,721 | \$5969 |
| FICA – Medical, All Positions, 1.4% x \$112,119 | \$1570 |

| | |
|--|----------|
| Retirement, Full-Time Positions, 10.4% x \$104,721 | \$10,891 |
| Health Insurance, Full-Time Positions, 17.8% x \$104,721 | \$18,640 |
| Total | \$37,070 |

3. Travel

Travel and per diem costs are those costs for travel and subsistence, which are directly related to the grant. Identify the number of trips planned, the purpose of each trip, the destination for each trip, the number of travelers, and the estimated cost of each trip.

| Category | EPA |
|---|----------|
| <i>Conferences: includes registration, airfare, meals, lodging, and ground transportation</i> | |
| Diesel Engine Emission Reduction Conference (3 rd quarter, 2009). Cost includes airfare to Michigan, hotel accommodations / Registration, meals, and other incidentals such as ground transportation for 2 staff. Cost = airfare @ \$650 each, hotel @ \$600 each, meals & other incidentals @ \$250 each. | \$3,000 |
| Clean Heavy-Duty Vehicle Conference (1 st quarter, 2010). Cost includes airfare to California, hotel accommodations, meals, ground transportation, and registration for 2 staff. Cost = airfare @ \$500 each, registration @\$500 each, hotel @ \$800 each, meals & other incidentals @ \$200 each. | \$4,000 |
| Georgia Association for Pupil Transportation (2 nd quarter, 2009). Cost includes hotel accommodations and meals for 3 staff. No transportation is requested since the conference is held in Georgia, and staff will drive state vehicles. Cost = hotel @ \$300 each and meals @ \$100 each. | \$1,200 |
| Alternative Fuel Vehicle Institute Conference (2 nd quarter, 2009). Cost includes airfare, hotel accommodations, meals, ground transportation, and registration for 2 staff. Cost = airfare @ \$400 each, registration @\$450 each, hotel @ \$900 each, meals & other @ \$250 each. | \$4,000 |
| SEDC Workshops (if travel is necessary) (date to be determined) Cost includes potential hotel accommodations and meals for 2 staff if any of the workshops require travel out of state. EPD anticipates that air fare will not be needed since the workshops are expected to be held in the southeast. No expenses will be incurred if all of the workshops are based in the metro-Atlanta area. | \$800 |
| Total | \$13,000 |

4. Supplies

Equipment (less than \$5,000), material, and supply costs are those costs directly related to the grant. Identify all supplies purchased and its cost. The budget detail should be as descriptive as possible. Categories of supplies to be

procured; e.g., laboratory supplies or office supplies, are acceptable if items cannot be reasonably separated. Provide the individual and total cost of supplies.

| Category | EPA |
|----------|-----|
| None | \$0 |

5. Equipment

Equipment, material, and supply costs are those costs directly related to the grant. Identify each item of equipment to be purchased which has an estimated acquisition cost of \$5,000 or more per unit and a useful life of more than one year. Provide a description of each item of equipment and its cost. No equipment may be purchased without the expressed approval of the EPA regional contact. If equipment purchased wholly or partially with assistance agreement funds is to be used on more than one project/program, acquisition costs or usage fees must be approved and allocated properly.

| Category | EPA |
|----------|-----|
| None | \$0 |

6. Contractual

Contractual services are those services directly related to the EPA program/project. Identify each proposed contract and specify its purpose, nature, period of performance and estimated cost. Do not include procurement contracts which are reflected in other object class categories such as equipment, supplies, etc. If funds allocated to this object class category include proposed expenditures not usually categorized as services to be procured at the market place, explanatory footnotes must be included. Provide the total cost for contracts.

| Category | EPA |
|----------|-----|
| None | \$0 |

Please describe your competitive bid process for contracts and/or sub-grants. Contracts must be competed for services and products. You must also conduct cost, price and value analyses to the extent required in 40 CFR Parts 30 or 31, as applicable, as well as any regulations covered by state or local procurement requirements. The regulations also contain limitations on consultant compensation. You are not required to identify contractors or consultants in your application. Moreover, if you have named a specific contractor or consultant in your application EPA approves, it does not relieve you of your obligations to comply with competitive procurement requirements as well as any regulations covered by state or local procurement requirements.

Not Applicable

Sub-grants or sub-awards may be used to fund partnerships with non-profit organizations and governmental entities. Successful applicants cannot use sub-grants or sub-awards to avoid requirements in EPA grant regulations for competitive procurement by using these instruments to acquire commercial

services or products to carry out its cooperative agreement. The nature of the transaction between the recipient and the sub-grantee must be consistent with the standards for distinguishing between vendor transactions and sub-recipient assistance under Subpart B Section 210 of OMB Circular A-133, and the definitions of “sub-award” at 40 CFR 30.2 (ff) or “sub-grant” at 40 CFR 31.3, as applicable.

7. Other

This category should include the funds going toward the actual State grants and to eligible entities. This category should constitute the main part of your budget.

| Category | EPA |
|--|-------------|
| Georgia Diesel Engine Retrofit Sub-Grant Funding | \$1,567,811 |

8. Direct Charges

Provide total amount of direct costs (items 1-7 above).

One Million Seven Hundred and Thirty Thousand dollars (\$1,730,000)

9. Indirect Charges

Indirect costs result from allocation of a grouping of administrative costs which are not easily identified as a direct cost. Provide the total amount of indirect costs. Include a copy of your current indirect cost agreement which reflects the approved rate.

SIGNATURES

This work plan and detailed budget narrative must be signed and dated by the Authorized Representative signing the SF-424 form.

If your organization has the capability to sign the application with a digital or electronic signature, this will be accepted.

APPENDIX

Resources

States may wish to consult the CFR and OMB circulars as referenced in the Federal Register Notice. Links to these references are:

40 CFR 31: <http://www.gpoaccess.gov/cfr/index.html>

OMB Circular A-87: <http://www.whitehouse.gov/omb/circulars/index.html>

More information is available on EPA’s web site at <http://www.epa.gov/otaq/eparecovery/progstate.htm>