



CLEAN TRANSPORTATION INNOVATIONS INCENTIVES FUND
School Bus Pilot Diesel Retrofit Project

PROJECT DESCRIPTION AND APPLICATION PACKAGE

TENNESSEE DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION

PROJECT PROPOSAL DEADLINE

Proposals must be received by
June 30, 2008

Send completed proposals to:

Tennessee Department of Transportation
ATTN: Linda Tidwell, Environmental Division
James K. Polk Building, Suite 900
505 Deaderick Street, Nashville, TN 37243-0334

Proposals may be submitted by email at:

Linda.Tidwell@state.tn.us

or by FAX at:

615-741-1098

For more information,
visit the TDOT website at www.tennessee.gov/tdot/cmaq

TDOT Clean Transportation Innovations Incentives Fund SCHOOL BUS PILOT DIESEL RETROFIT PROJECT PROJECT FUNDING APPLICATION

I. Introduction

The Tennessee Department of Transportation (TDOT) announces the availability of funds and solicits proposals to purchase and install emission control technologies (diesel retrofit devices) on diesel-powered school buses in particulate matter (PM 2.5) and ozone nonattainment / maintenance areas. TDOT has initiated the Clean Transportation Innovations Incentives Fund to reduce exhaust emissions from heavy-duty diesel engines, especially those pollutants that contribute to fine particle pollution (PM 2.5).

The total funding available for this diesel retrofit project is \$1,000,000, which includes \$800,000 in CMAQ funds allocated by TDOT and \$200,000 allocated by the Tennessee Department of Environment and Conservation (TDEC). The federal Congestion Mitigation and Air Quality Improvement (CMAQ) program is authorized and funded through the federal Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and provides funding for transportation projects to reduce vehicle emissions in air quality nonattainment and maintenance areas.

For this school bus pilot project, TDOT would like to fund a variety of qualified technologies. Applicants may apply for funding to cover as much as 100 percent of the purchase and installation cost of diesel retrofit technologies up to the maximum grant award of \$250,000. This is a competitive grant program and projects will be chosen for funding using the project selection criteria outlined in Section VII of this package. TDOT reserves the right to fund all or none of the proposals received and to fund partial projects.

Because CMAQ is a reimbursement program, applicants must be able to provide funding to cover expenses as they are incurred. Projects selected for funding will be reimbursed *up to the amount approved for that project* upon documentation of payment for eligible expenses. **TDOT will not reimburse applicants for any expenses or liabilities incurred before final grant contract approval and formal written notification to proceed.**

II. Project application process

This application package includes information regarding the project background, project application process and project selection process, and a proposal application form. Proposals must include an **Application Cover Sheet** and **Grant Budget Worksheet**, and **School Bus and Retrofit Information Worksheet** (included in this package). This application package and a downloadable application form (Microsoft Word format) are available on the TDOT website at www.tennessee.gov/tdot/cmaq.

III. Proposal submittal deadline

Proposals must be received no later than June 30, 2008.

Note: Final funding pending Federal Highway Administration approval of partnership agreements

Completed proposals may be submitted by mail to the Tennessee Department of Transportation, Attn: Linda Tidwell, Environmental Division, James K. Polk Building, Suite 900, 505 Deaderick Street, Nashville, TN 37243-0334. Proposals may be submitted by email at Linda.Tidwell@state.tn.us or by FAX at 615-741-1098.

For questions regarding this application package, please contact Linda Tidwell at (615) 253-2860.

IV. Who is eligible to apply for project funding?

- a. This competitive funding opportunity seeks to retrofit publicly owned (first priority) or privately owned diesel-powered school buses in sixteen counties designated by the U.S. Environmental Protection Agency (EPA) as nonattainment or maintenance for the National Ambient Air Quality Standard (NAAQS) for PM 2.5 and/or ozone. The counties which are eligible to receive CMAQ funds include Anderson, Blount, Cocke (partial county), Davidson, Hamilton, Jefferson, Knox, Loudon, Montgomery, Roane (partial county), Rutherford, Sevier, Shelby, Sumner, Williamson and Wilson counties.
- b. Local government school districts that own and operate school bus fleets in any of the PM 2.5 and ozone nonattainment and maintenance counties listed above may apply.
- c. Local government school districts that contract all or portions of their school bus service may apply on behalf of and with the agreement of the applicable school bus contractor(s) operating in the Tennessee PM 2.5 and ozone nonattainment and maintenance counties listed above. School bus contractors must have active contracts in place for a minimum period of three (3) years.

V. What is eligible for project funding?

- a. Applicants must propose to retrofit school buses that they reasonably expect to remain in service for at least five (5) years. A priority should be placed on buses ten years old or less (engine model year 1998 and newer). Buses with 2007 emissions compliant engines and buses already equipped with emissions reduction technology are not eligible to participate.
- b. For purposes of this School Bus Pilot Diesel Retrofit Project, diesel retrofits are defined as aftertreatment emissions control technologies included on the list of verified technologies maintained by the U.S. EPA or the California Air Resources Board (CARB) to be installed **in conjunction with** a closed crankcase system. Information on verified technologies may be found at <http://www.epa.gov/cleandiesel/> and www.arb.ca.gov/diesel/verdev/verdev.htm.
- c. Applicants may propose to retrofit buses using Level 1, 2 or 3 devices (described below) and may propose a combination of devices. Emissions reduction technologies should be selected for appropriate engine model years and to best suit the needs of the school district.
 - o Level 3 devices, such as a diesel particulate filter (DPF), in conjunction with a closed crankcase system. Level 3 technologies achieve at least 85 percent or greater reduction in particulate matter or less than 0.01 g/bhp-hr emission level.
 - o Level 2 devices, such as a diesel multi-stage filter (DMF), in conjunction with a closed crankcase system. Level 2 technologies achieve at least 50 percent or greater reduction in particulate matter.
 - o Level 1 devices, such as a diesel oxidation catalyst (DOC), in conjunction with a closed crankcase system. Level 1 technologies achieve at least 25 percent or greater reduction in particulate matter.
- d. Proposals may include installation costs for proposed technologies as eligible project expenses.

VI. What costs are not eligible for project funding?

Ineligible costs include, but may not be limited to:

- a. Routine operating expenses, maintenance costs (e.g., replacement filters) and fuel costs.
- b. Costs for staff training or other administrative costs.
- c. Work performed or liabilities incurred before receiving official written notice of grant contract approval or costs incurred for work or purchases not included in the approved project budget.

VII. Project selection criteria

TDOT would like to fund a variety of qualified technologies for this school bus pilot project. In selecting projects for funding in this competitive grant program, the criteria listed below will be considered. Weight will be assigned to evaluation criteria, and proposals will be ranked accordingly.

a. Priority criteria

- Publicly owned school buses will be given greater priority than privately owned buses
- Privately owned buses with longer local contract periods will be given greater weight than those with contracts of less duration
- Estimated emissions reductions over the lifetime of the engine and the chosen retrofit technology
- Cost-effectiveness of the proposed project (e.g., cost per kilogram or cost per ton of emissions reduced per dollar of public funds invested)

b. Owner commitments

- Proposals that provide a portion of the project funding as matching funds or that propose to reduce project costs through means such as installing retrofit equipment using school district bus maintenance staff, where feasible, will be given greater weight.
- Proposals to use B20 blend biodiesel fuel will be given greater weight.

c. Local considerations

- Number of students in the district that ride the school buses being proposed for retrofit
- Distances that the buses travel and amount of time children spend on school buses
- Frequency of school bus stops
- Average age of all school buses in the district
- School district capacity to maintain retrofitted buses and proposed technologies
- Percent of school children participating in free lunch program
- County rate per 100,000 for inpatient hospitalizations and emergency department visits for primary asthma diagnosis for children aged 5-16 (Note: Data has been provided by the Tennessee Department of Health and does not need to be included in proposals.)

VIII. Project selection process

A project selection review team will review and rank eligible proposals based on the criteria described in Section VII of this application package. TDOT will work with successful applicants to establish partnership grant agreements that include the responsibilities described in Sections IX and X below.

IX. Responsibilities of TDOT and/or TDEC

- a. Verify installation of retrofit devices on selected buses.
- b. Determine the emissions reductions and cost-effectiveness of this project based on data reported by school districts, such as equipment use and fuel consumption.
- c. Provide decals to identify retrofitted equipment and publicly recognize school districts participating in this Clean Transportation Partnership project.

X. Responsibilities of school districts

- a. Provide information as requested for school buses proposed for retrofit and the proposed retrofit technologies.
- b. School districts and private school bus contractors selected for retrofit funding must agree to maintain retrofitted buses properly and must agree to keep retrofitted buses in the nonattainment / maintenance counties for at least two (2) years during the grant contract period.
- c. Agree to implement a reasonable policy to reduce unnecessary idling both on and off school property. An idle reduction policy may be tailored to fit the needs of individual school districts; however, the policy must include minimum guidelines suggested by the Tennessee Association of Pupil Transportation. The school system must ensure that all bus drivers are aware of the idle reduction policy and take necessary steps to enforce the policy.
- d. Commit to raise student awareness of the benefits of reducing harmful diesel emissions.
- e. Commit to share information on diesel emissions impacts and solutions from this pilot project with other school boards, county and state officials.
- f. Allow state inspectors to verify installation of retrofit devices.
- g. Display decal or other visual identification provided for use on retrofitted vehicles to identify the vehicle as a participant in this Clean Transportation Partnership project.
- h. Notify TDOT if one or more retrofitted vehicles are relocated outside of the listed nonattainment or maintenance areas during the contract period.
- i. Report equipment use, fuel consumption data and other data for retrofitted vehicles on a quarterly basis using the format provided by TDOT. This information is needed to verify emissions reductions achieved and cost-effectiveness of this project.
- j. Pay all project costs up front and seek reimbursement for eligible expenses after the project is completed. Individual grant agreements will include approved eligible project costs agreed upon by TDOT and the applicant. **In no event will costs be reimbursed for work done or liabilities incurred before official written notice of contract approval or for costs incurred for work or equipment not included in the approved project costs.**

XI. Disposition of facilities and equipment

TDOT has a responsibility to protect the investment of public funds in public-private partnership projects should circumstances occur that affect the original terms of the agreement. In the event of a change in ownership, insolvency or business closure during the term of the agreement, TDOT may seek reimbursement of public funds invested on a prorated basis.



Pursuant to the State of Tennessee's policy of non-discrimination, the Tennessee Department of Transportation does not discriminate on the basis of race, age, sex, religion, color, disability, or national origin.

GRANT BUDGET DETAIL INFORMATION WORKSHEET
TDOT School Bus Pilot Diesel Retrofit Project
(See instructions next page)

Name of School District: _____

SECTION 1: CAPITAL PURCHASES	ESTIMATED COSTS
SPECIFIC, DESCRIPTIVE DETAIL OF RETROFIT	
SPECIFIC, DESCRIPTIVE DETAIL OF RETROFIT	
SPECIFIC, DESCRIPTIVE DETAIL OF RETROFIT	
SPECIFIC, DESCRIPTIVE DETAIL OF RETROFIT	
TOTAL COSTS FOR SECTION 1	

SECTION 2: PROFESSIONAL FEES	ESTIMATED COSTS
SPECIFIC, DESCRIPTIVE DETAIL OF WORK TO BE PERFORMED	
SPECIFIC, DESCRIPTIVE DETAIL OF WORK TO BE PERFORMED	
SPECIFIC, DESCRIPTIVE DETAIL OF WORK TO BE PERFORMED	
SPECIFIC, DESCRIPTIVE DETAIL OF WORK TO BE PERFORMED	
TOTAL COSTS FOR SECTION 2	

SECTION 3: SUPPLIES	ESTIMATED COSTS
SPECIFIC, DESCRIPTIVE, DETAIL OF SUPPLIES	
TOTAL COSTS FOR SECTION 3	
TOTAL COSTS FOR SECTIONS 1, 2 AND 3	

INSTRUCTIONS FOR GRANT BUDGET DETAIL INFORMATION WORKSHEET

SECTION 1: CAPITAL PURCHASES

SPECIFIC, DESCRIPTIVE, DETAIL OF RETROFIT

For each type of retrofit device to be purchased, provide the number of units and the estimated cost to purchase those units. Please complete a separate line for each **category** of retrofit device (e.g., diesel oxidation catalysts, diesel multi-stage filter, diesel particulate filters). Include the closed crankcase systems for each category. Add additional lines as needed.

EXAMPLE: (Use a separate line for each different type of device.)

SPECIFIC, DESCRIPTIVE DETAIL OF RETROFIT	Estimated Costs
4 diesel particulate filters and closed crankcase systems @ \$X,XXX.XX each	\$XX,XXX.XX
4 diesel oxidation catalysts and closed crankcase systems @ \$X,XXX.XX each	\$XX,XXX.XX
Total Cost for Section 1	\$XX,XXX.XX

SECTION 2: PROFESSIONAL FEES

SPECIFIC, DESCRIPTIVE, DETAIL OF WORK TO BE PERFORMED

Describe services to be provided for each **category** of retrofit as listed in Section 1 and provide the estimated installation and labor cost per category. Please include any costs that you intend to use for matching funds.

SECTION 3: SUPPLIES

SPECIFIC, DESCRIPTIVE, DETAIL OF SUPPLIES

Describe any other items not included as Capital Purchases and provide estimated costs. Note: Replacement filters for retrofit devices are **not** eligible expenses.