CLEAN TRANSPORTATION INNOVATIONS INCENTIVES FUND

Pilot Diesel Retrofit Partnership Project

Road Construction Companies

PROJECT DESCRIPTION AND APPLICATION PACKAGE

TENNESSEE DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL DIVISION

PROJECT PROPOSAL DEADLINE

Proposals must be received by
January 26, 2007

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 PILOT DIESEL RETROFIT PARTNERSHIP
Road Construction Companies
PROJECT FUNDING APPLICATION

The Tennessee Department of Transportation (TDOT) announces the availability of funds and solicits proposals for partnership projects to purchase and install emission control technologies (retrofit devices) on heavy-duty diesel-powered construction equipment and diesel vehicles to be used in state road construction projects in PM2.5 nonattainment areas and adjacent ozone nonattainment areas. This competitive funding opportunity is open to private sector road construction companies and associated suppliers working on current or recently awarded state road construction projects in the following counties designated by the U.S. Environmental Protection Agency (EPA) as nonattainment for the National Ambient Air Quality Standard (NAAQS) for PM 2.5 and/or ozone:

PM 2.5 and Ozone	**PM 2.5**	**Ozone**
Anderson	Hamilton	Jefferson
Blount	Roane (partial county)	Cocke (partial county)
Knox		Sevier
Loudon		

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). Road construction companies and associated suppliers are invited to submit proposals for cost-sharing funding to retrofit existing diesel construction equipment or construction on-road diesel vehicles to reduce diesel exhaust pollutants, including particulate matter (PM 10 and PM 2.5), nitrogen oxides (NOx), carbon monoxide (CO), hydrocarbons (HC), and other mobile source air pollutants.

For purposes of this Road Construction Diesel Retrofit Partnership Project, **"retrofit"** is defined as:

- Addition of pollution control aftertreatment equipment
- Upgrading a certified engine to a cleaner certified configuration
- Upgrading an uncertified engine to a cleaner "certified-like" configuration
- Early replacement of older engines with newer, cleaner engines (in lieu of regular expected rebuilding)

Project application process

This application package includes information regarding the project background, project application process and project selection, and a proposal application form. This package and a downloadable application form are available on the TDOT website at www.tennessee.gov/tdot/cmaq.

Proposal submittal deadline..... January 26, 2007
Preliminary announcement of selected proposals*..... March 15, 2007
*Final funding selections pending FHWA approval of partnership agreements

Proposals must be received by 4:30 p.m. CST, January 26, 2007. Completed proposals may be submitted through the U.S. Postal Service 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 pertaining to procedures, please contact Linda Tidwell at (615) 253-2860.

TDOT PILOT DIESEL RETROFIT PARTNERSHIP
Road Construction Companies

I. Funding availability

Funds are made available from the Tennessee Department of Transportation and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. The CMAQ Program is authorized and funded through the federal Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The total funding available for this competitive funding opportunity is $800,000 in federal CMAQ funds, and the maximum project award to any single proposal is $300,000. TDOT reserves the right to fund all or none of the proposals received and to fund partial projects.

For selected projects, TDOT will pay up to 80 percent of approved project cost. The CMAQ program requires a minimum of 20 percent non-federal match. To meet this requirement; at least 20 percent of project cost will be the responsibility of the applicant. Providing a larger match will strengthen a company's proposal. **CMAQ is a reimbursement program and applicants must provide non-federal 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.

Project proposals must include an Application Cover Sheet, Grant Budget Detail Information Worksheet and completed Diesel Retrofit Project Worksheet, which requests specific information on each piece of equipment proposed for retrofit, including the technologies to be purchased, estimated costs and estimated emission reductions to be achieved by the retrofit. For a downloadable application, go to the TDOT website at www.tennessee.gov/tdot/cmaq. The application with Application Cover Sheet and Grant Budget Detail Information Worksheet is available in Microsoft Word format. The Diesel Retrofit Project Worksheet is a separate downloadable document in Microsoft Excel format.

II. Who is eligible to apply for project funding?

- Private sector construction companies and associated suppliers working on or providing materials for state road construction projects in PM 2.5 nonattainment areas and adjacent ozone nonattainment areas.
- Nonroad construction equipment must be used in Title 23 projects located in nonattainment or maintenance areas.
- Construction companies must have ongoing or recently awarded road construction projects in the listed nonattainment areas before the application deadline.
- Applicant must be in compliance with applicable state and local laws and ordinances.

III. What is eligible for funding?

- Applicants must propose to retrofit equipment that they expect to use in ongoing and recently awarded state road construction projects in the listed nonattainment counties.
- Proposed retrofit technologies must be identified and supported by one of the two following alternatives:
    1) Technologies that have been verified by EPA or the California Air Resources Board (CARB), where available. Information on verified technologies may be found at http://www.epa.gov/cleandiesel/ and www.arb.ca.gov/diesel/verdev/verdev.htm

2) Unverified technologies that have provided demonstrated emissions reductions may be eligible upon approval by EPA, the Federal Highway Administration (FHWA), the Tennessee Department of Environment and Conservation (TDEC) and TDOT. Applicants must submit a letter from the manufacturer of the retrofit technology supporting the emission reduction benefits of technologies not currently on the EPA or CARB verified technology lists.

- Applicants may propose to upgrade engines to a higher Tier level.
- Applicants may propose to repower existing diesel equipment or vehicles by replacing an old engine with a newer, cleaner model. The applicant must:
  - Justify the investment of public funds by demonstrating the emission reductions to be achieved through repowering. For example, frequently used equipment retrofitted with diesel oxidation catalysts or diesel particulate filters may achieve greater total emission reductions over a specific period of time than an infrequently used repowered dozer; however, repowering could achieve significant emission reductions in the nonattainment area if that piece of equipment is expected to be used significantly during the four-year term of the public-private partnership agreement.
  - Applicants must verify proper disposition of the engine block being retired.
- Eligible construction equipment and vehicles include, but are not limited to:
  - Asphalt and concrete pavers and paving/surfacing equipment, tampers/rammers, plate compactors, concrete pavers, rollers, scrapers, trenchers, bore/drill rigs, excavators, cement and mortar mixers, cranes, graders, nonroad trucks, crushing/processing equipment, rough terrain forklifts, rubber-tired loaders and dozers, tractors/loaders/backhoes, crawler tractors, skid steer loaders, nonroad tractors, dumpers/tenders, and other construction equipment.
  - Heavy-duty diesel vehicles of 8,501 pounds Gross Vehicle Weight and higher (e.g., dump trucks) used in construction.

Ineligible costs include but may not be limited to:

- Operating expenses and fuel costs, including incremental costs of fuel. The use of cleaner fuels, such as ultra-low sulfur diesel (ULSD) and biodiesel blends, is encouraged.
- Costs to fund an obligation imposed on private sector or nonprofit entities under the federal Clean Air Act or any other state or federal law.
- Work done prior to official notice of project funding approval or for costs incurred for work not included in the approved project budget.

IV. Project selection criteria

The following criteria will be considered in selecting projects for funding:

- Estimated emissions reductions over the lifetime of the chosen retrofit technology.
- Cost-effectiveness of proposed technologies (e.g., cost per kilogram or cost per ton of emissions reduced per dollar of public funds invested). TDOT will also consider overall cost-effectiveness of the project proposal (total project cost, including partner matching funds).
- Amount of nonfederal match funds offered.
- Commitment to use retrofitted equipment in the listed nonattainment areas beyond the road construction contract period will be given more weight.

- Commitment to use biodiesel in company diesel engine fleet. (Company commitments to use a B20 blend will be given more weight.)
- Commitment to use ultra-low sulfur diesel (≤ 15 ppm sulfur) will be given more weight.

V. Project selection process

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

VI. Responsibilities of TDOT

- Work with partner road construction companies and suppliers to ensure that they have access to necessary information to complete retrofit projects.
- Process invoices for reimbursement for approved project costs in a timely manner.
- Verify installation of retrofit devices on selected equipment and use of retrofitted equipment in ongoing and recently awarded road construction projects in nonattainment areas.
- Establish a simplified reporting mechanism to collect equipment use data for the purpose of determining the emissions reductions and cost-effectiveness of this project.
- Determine emissions reductions and cost-effectiveness of projects based on data received from participating construction companies. TDOT will maintain generalized data relative to emissions reductions and cost effectiveness.
- Provide decals to identify retrofitted equipment and publicly recognize construction companies participating in this cleaner construction partnership project.

VII. Responsibilities of partner companies

- Propose to retrofit equipment expected to be used in current or recently awarded road construction projects funded under Title 23 in the listed nonattainment counties.
- Agree to use the retrofitted equipment in ongoing and recently awarded state road construction projects in the listed nonattainment counties. In addition, partner companies must make a good faith commitment to use the retrofitted equipment in the listed nonattainment areas whenever possible during the four-year term of the public-private partnership agreement. Partner companies will be asked to report actual usage in nonattainment areas for the purpose of determining emission reductions.
- Commit to use low-sulfur fuel (< 500 ppm sulfur content) in retrofitted equipment, unless the retrofit technology chosen by the applicant requires the use of ultra-low sulfur diesel fuel (<15 ppm sulfur content). Biodiesel blends are encouraged but are not required. [Note: On-road diesel fuel used in nonroad applications is exempt from state and federal motor vehicle taxes (state sales tax still applies to both on-road and nonroad use). It is the contractor's responsibility to apply for a tax refund or tax credit for applicable use taxes.]
- Establish a company policy to reduce unnecessary engine idling.
- Display decals or other visual identification provided for use on retrofitted equipment to identify the equipment as a participant in this cleaner construction project.
- Provide TDOT a list of retrofitted equipment being used on project site(s) in the listed nonattainment areas and allow TDOT inspectors to verify use of retrofitted equipment.

- Report equipment use data for retrofitted equipment 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.
- Notify TDOT when retrofitted equipment is moved outside of the listed nonattainment areas.
- Pay all project costs up front and seek reimbursement for eligible expenses after the project is completed. Individual partnership agreements will include approved eligible project costs agreed upon by TDOT and the applicant. In no event will costs be reimbursed for work done prior to official notice of project funding approval, for costs incurred for work not included in the approved project costs or for cost overruns.

VIII. 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.

CLEAN TRANSPORTATION INNOVATIONS INCENTIVES FUND

Road Construction Pilot Diesel Retrofit Partnership Project

Application Cover Sheet

Company Name and Mailing Address:	**Contact Name:** **Telephone:** **FAX:** **Email:**
Owner's Name:	**Owner's Federal Employer ID:**
Person with Contract Signing Authority:	**Title:**
Signature of Person with Contract Signing Authority:	**Date:**

Project Funding Information (*Please provide budget details on the attached budget worksheet.)*	
Amount of funding requested:	
Applicant match (nonfederal): *(Minimum 20% of total project cost)*	
Total project cost:	

Please answer questions below. Use additional pages if necessary.

A. Identify applicant's construction project(s) in listed nonattainment areas. Include project number, county or counties, and duration of road construction contract period. Road construction suppliers in the nonattainment areas should indicate the location where retrofitted equipment will be used in support of road construction projects.

B. Indicate sulfur level of fuel to be used: _____ Low sulfur (≤ 500 ppm) _____ Ultra low sulfur (≤ 15ppm)

C. Please provide the number of diesel vehicles / equipment to be fueled by biodiesel and indicate the percentage blend to be used (e.g., B5, B10, B20).

D. Please describe your plans for placing priority on using retrofitted equipment in the listed nonattainment areas.

E. Please provide an estimated schedule for installing retrofits and an estimated date that retrofit installations will be completed (e.g., all retrofits will be installed within XX months after contract approval).

Each applicant must complete and submit an **Application Cover Sheet** and **Grant Budget Worksheet** (downloadable in Microsoft Word format from TDOT website) and **Equipment and Retrofit Descriptions** (downloadable in Microsoft Excel format).

GRANT BUDGET DETAIL INFORMATION WORKSHEET
TDOT Road Construction Pilot Diesel Retrofit Grant
(See instructions next page)

Applicant Name:

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

Important: Provide descriptions and costs only for those items or services to be procured with grant funding. Include **total** estimated project costs for each category (Capital Purchases, Professional Fees and Supplies). Your total estimated costs will be used to develop the final Grant Contract budget and establish the Grantee's matching share of the estimated costs. The State may reimburse up to 80% of approved costs not to exceed the total amount proposed in the Grantee's application.

Capital Purchases includes items classified as nonexpendable, tangible personal property.

Professional Fees includes services procured, such as installation and labor costs.

Supplies may include miscellaneous items or materials not included as Capital Purchases.

SECTION 1: CAPITAL PURCHASES

SPECIFIC, DESCRIPTIVE, DETAIL OF RETROFIT
Please complete a separate line for each **category** of retrofit (e.g., diesel oxidation catalysts, diesel particulate filters, engine upgrades, engine repowers). Include the number of retrofits in each category and provide the estimated cost per category. Add additional lines as needed.

SECTION 2: PROFESSIONAL FEES

SPECIFIC, DESCRIPTIVE, DETAIL OF WORK TO BE PERFORMED
Describe services to be provided for each category of retrofit and provide the estimated cost per category.

SECTION 3: SUPPLIES

SPECIFIC, DESCRIPTIVE, DETAIL OF SUPPLIES
Describe any other items or materials not included as Capital Purchases and provide estimated costs.

Attachment A: TDOT Road Construction Diesel Retrofit Partnership Project: Equipment and Retrofit Descriptions (downloadable form available in Microsoft Excel format)

Applicant Name:

Section A: Please provide the following information for each vehicle/certified highway diesel engine (1970 model year and newer) proposed for retrofit.

Equipment make, model and VIN/serial number	Equipment use (on-road or non-road)	Engine manufacturer and model year*	Rated horsepower	Engine family	Typical hourly fuel consumption or expected average fuel economy	Estimated average annual hours of operation or miles traveled	Estimated percent of time to be used in nonattainment area	Estimated remaining hours of service of engine	Description of retrofit	Retrofit manufacturer	Estimated emission reductions for PM, NOx, HC, CO (kg/yr or tons/yr)	Expected life of retrofit technology	Cost of retrofit	Cost of installation

Section B: Please provide the following information for each certified nonroad diesel engine (1996 model year and newer) proposed for retrofit.

Equipment make, model and VIN/serial number	Equipment use (on-road or non-road)	Engine manufacturer and model year*	Rated horsepower	Engine family	Typical hourly fuel consumption or expected annual fuel consumption	Estimated average annual hours of operation	Estimated percent of time to be used in nonattainment area	Estimated remaining hours of service of engine	Description of retrofit	Retrofit manufacturer	Estimated emission reductions for PM, NOx, HC, CO (kg/yr or tons/yr)	Expected life of retrofit technology	Cost of retrofit	Cost of installation

Section C: Please provide the following information for each uncertified or precertified nonroad diesel engine (1995 model year and older) proposed for retrofit.

Equipment make, model and VIN/serial number	Equipment use (on-road or non-road)	Engine manufacturer and model year*	Rated horsepower	Engine family	Typical hourly fuel consumption or expected annual fuel consumption	Estimated average annual hours of operation	Estimated percent of time to be used in nonattainment area	Estimated remaining hours of service of engine	Description of retrofit to be installed	Retrofit manufacturer	Estimated emission reductions for PM, NOx, HC, CO (kg/yr or tons/yr)	Expected life of retrofit technology	Cost of retrofit	Cost of installation

*If engine model year is unknown, use the model year of the equipment