



**North Central Texas
Council of Governments**

NORTH CENTRAL TEXAS CLEAN SCHOOL BUS PROGRAM



2008 CALL FOR PROJECTS

GUIDELINES

October 13, 2008

www.nctcog.org/CleansSchoolBus

INTRODUCTION

The North Central Texas (NCT) Clean School Bus Program has been created to assist schools, school districts, and school bus operators in the NCT region in reducing emissions and improving air quality. One segment of the program provides financial assistance through a competitive call for projects for retrofitting, repowering and replacing older, high-polluting school buses. This call for projects is made possible in part by a grant from the U.S. Environmental Protection Agency (EPA) through the Blue Skyways Collaborative and is being administered by the North Central Texas Council of Governments (NCTCOG).

PURPOSE

Nine counties in the NCT region have been classified as moderate nonattainment for 8-hour ozone. This means these counties do not meet the National Ambient Air Quality Standard set forth by the U.S. EPA for this pollutant. Ozone is formed when nitrogen oxides (NO_x) and volatile organic compounds (VOC) mix in the presence of sunlight and heat. The region has a deadline of June 2010 to come into compliance with the ozone standard and numerous efforts are being implemented to reduce the amount of pollutants emitted that contribute to ozone formation.

One of these measures is to reduce emissions from school bus fleets. 2007 data from the Texas Education Administration indicates there are close to 6,500 school buses in the Dallas-Fort Worth (DFW) nine-county nonattainment area which, when combined, emit over 2.70 tons per day of NO_x and 0.18 tons per day of VOCs. Nearly 40 percent of school buses are over a decade old, meaning they pre-date current air pollution control requirements. The NCT Clean School Bus program is both fuel- and technology-neutral. The replacement, repower, or retrofit of older school buses with clean emissions technology would result in a significant reduction in pollutants and an improvement in air quality.

There is a strong need to reduce emissions from school buses in the NCT area not only to meet regional clean air goals, but also to protect the health and wellbeing of school-aged children. Studies have concluded that children's health is considerably more at risk of being adversely affected by air pollution than adults. Numerous studies have been conducted regarding the effects of school bus exhaust pollution on children and key findings include:

- 1) Pollution from the exhaust system of a school bus has a significant impact on the occupants inside the bus, particularly when the windows are up.¹
- 2) Emissions from engine start-up are significantly less than the emissions produced from idling over a 10-minute period.² Thus; anti-idling policies need to be strictly enforced by schools and school bus operators.

The 2008 Call for Projects is intended to provide grants to school districts and school bus operators through a competitive call to reduce emissions in the NCT region by retrofitting, repowering, and replacing high-emitting buses.

ELIGIBLE ENTITIES

This call is open to all schools, school districts, and school bus operators in the NCTCOG 16-county service area that have adopted the Clean Fleet Vehicle Policy approved by the NCTCOG Regional Transportation Council (RTC). The NCTCOG 16-county service area includes the counties of:

Collin	Dallas	Denton	Ellis
Erath	Hood	Hunt	Johnson
Kaufman	Navarro	Palo Pinto	Parker
Rockwall	Somervell	Tarrant	Wise

Counties in **BOLD** are classified as “Nonattainment” for the pollutant ozone and those not in bold are classified as “Attainment”. School buses that operate primarily within nonattainment counties may be given greater consideration in the scoring process.

The Clean Fleet Vehicle Policy is a model ordinance that addresses ways fleets can have a positive impact on air quality through best practices in vehicle acquisition, maintenance, and operations. This policy also includes restrictions on vehicle idling and requirements for driver training. Adoption must occur prior to the closing of this call for projects and a signed copy of the policy must be submitted to NCTCOG. Entities that have adopted the policy must be in compliance with all policy requirements, including annual reporting, in order to be eligible for funding. For more information on the Clean Fleet Vehicle Policy, or to check your organization’s status, please visit: www.nctcog.org/fleetpolicy.

ELIGIBLE PROJECTS

Vehicles must be classified as a school bus. Each individual school bus project must result in a 25 percent or greater reduction of NOx. Particulate Matter (PM) emissions reductions will be considered in the scoring process, with NOx being the primary focus due to the region being in nonattainment for ozone.

Eligible projects include:

Vehicle Replacement - replacement of a school bus with a newer model year school bus, including alternatively powered buses.

Engine Repower - replacement of an existing engine with a certified new, rebuilt, or remanufactured engine.

Retrofit - add-on of emission control equipment to the existing engine or exhaust system. Technologies must be EPA or California Air Resources Board (CARB) verified.

A list of all approved retrofit technologies can be found at:

EPA - <http://www.epa.gov/otag/retrofit/verif-list.htm>
 CARB - www.arb.ca.gov/diesel/verdev/vt/cvt.htm

A current list, as of September 29, 2008, of EPA and CARB verified technologies with a reduction in NOx emissions of 25 percent or greater are provided in Table 1.

Table 1: Verified Retrofit Technologies with NOx Emissions Reductions 25 Percent or Greater				
Manufacturer	Technology	Applicability	Reduction (%)	
			PM	NOx
Cleaire Longview	Lean NOx Catalyst and DPF	1993-2003 model year on-road; 15 ppm sulfur diesel.	85	25
International Truck & Engine Corp.	Green Diesel Technology-Low NOx Calibration plus Diesel Oxidation Catalyst with Ultra Low Sulfur Diesel (ULSD)	Highway, light heavy-duty, 4 cycle, Navistar/International engines, model years 1999 - 2003 in the following families: XNVXH0444ANA, YNVXH0444ANB, 1NVXH0444ANB, 2NVXH0444ANB, 3NVXH0444ANB	0 to 10	25
Johnson Matthey EGRT	EGR/DPF	2000 International DT-466, 2000 Cummins ISM 2001 Cummins ISB, 1998-2002 Cummins ISC, 2001 Cummins ISL, 2001 MY DDC - 50, and 2001 DDC - 60. on-road; 15 ppm sulfur diesel.	85	40

Due to more stringent emissions controls on newer engines, it is recommended that school buses with engines manufactured prior to 1993 are best candidates for vehicle replacement or engine repower. Vehicles with engines manufactured in 1993 or after are candidates for vehicle replacement, engine repower, and retrofit. Emission standards for on-road heavy-duty vehicles are given in Table 2.

Table 2: On-Road Heavy-Duty CI Engines NOx Emission Standards	
Year of Manufacture	Diesel Engines Emission Standard
	NOx Only (g/bhp-hr)
1989 and earlier	10.7
1990	6.0
1991-1997	5.0
1998-2003*	4.0
2004-2006*	2.375 - 4.0
2007-2010*	0.2 - 2.375

* Due to engine phase-in schedules, any application request for a 2003 or newer engine must include a family engine code to determine emissions levels.

SCHEDULE

Task	Estimated Timeframe
Call for Projects Opens	October 13, 2008
Workshop	October 17, 2008
Call for Projects Deadline	November 14, 2008 – 5 p.m. CST
Evaluate & Select Proposals	November – December 2008
Announce Awarded Projects	February 2009
Technology Procurement & Installation	April 2009 – March 2010

REQUIREMENTS

Projects must comply with the following elements to be considered for funding.

- **Clean Fleet Vehicle Policy:** Applicants must have adopted the Clean Fleet Vehicle Policy prior to the project deadline, November 14, 2008, at 5 p.m. CST and be in compliance with annual reporting requirements.
- **Operation:** School buses must operate within the 16-county service area and must continue to operate within the stated counties of operation for the entire approved activity life of the grant.
- **Project Type:** Project(s) need to be a replacement, repower, or retrofit, and all project types are required to achieve a reduction of NOx emissions of 25 percent or greater. Retrofit projects must be EPA/CARB verified. Applications must include at least one bid for every project submitted.
- **Project Dates:** Projects must be implemented between April 2009 and March 2010.

- **Funding Cap:** Funding awards may not exceed a set funding threshold based on the total cost of the project depending on project type. A cap on the maximum allowable funding is applicable as follows:
 - Vehicle Replacement Projects – 45 percent
 - Engine Repower Projects – 50 percent
 - Retrofit Projects – 80 percent

- **SIP Credit:** All projects must be eligible for SIP credits and applicants must agree to surrender all emission credits to NCTCOG for the duration of project activity life.

It is not NCTCOG’s intention to fund replacement projects that would have occurred through the normal attrition of vehicles and equipment or to provide funds for expanding a fleet. Therefore, projects must have a minimum activity life of five years and a maximum of ten years, meaning the replacement, repower, or retrofit activity would not have occurred without the financial assistance provided.

VEHICLE AND ENGINE DISPOSTION

Vehicles and engines being replaced must be rendered permanently inoperable and disposed of in an environmentally responsible manner and in accordance with local disposal laws. This includes drilling a hole in the engine block, cutting the frame of the chassis in a 75 percent wedge, and recycling salvageable materials. Documentation of disposition, including before and after photographs, will be required upon request for reimbursement. NCTCOG staff will be available, upon request, to witness vehicle destruction, if so desired.

APPLICATION PROCESS

To apply for funding, applicants must submit a complete grant application, including bids for new vehicles, engines, retrofit technology, and installation by the application deadline. Application forms and other materials for the 2008 Call for Projects may be downloaded from the NCT Clean School Bus Program Web site at www.nctcog.org/cleanschoolbus or a hard copy may be obtained by contacting NCTCOG staff as indicated below in the *Contact Information* section of this document.

Applications must be received by 5 p.m. CST on Friday, November 14, 2008. In accordance with the call for projects procedures established by the RTC Bylaws, NCTCOG must have the submitted application “in hand” at the NCTCOG offices by the deadline. Applications that are postmarked by the deadline do not constitute an on-time application. In addition, supplemental information will not be accepted after the deadline. Applicants are encouraged to submit applications far enough in advance of the submission deadline to allow NCTCOG staff to review for completeness.

Submit one (1) electronic copy, (on a compact disc or by e-mail at cleanschoolbus@nctcog.org) and one (1) hard copy of the signed and completed application to:

Regular mail:

North Central Texas Council of Governments
Transportation Department
Attn: Amanda Brimmer
P.O. Box 5888
Arlington, Texas 76005-5888

or

Physical location:

North Central Texas Council of Governments
Transportation Department
Attn: Amanda Brimmer
616 Six Flags Drive
Centerpoint Two
Arlington, Texas 76011

SELECTION CRITERIA

Properly completed applications will be evaluated and ranked by NCTCOG staff based on the following criteria:

- Cost-Effectiveness
 - Cost per ton of NOx reduced (1st Priority)
 - Total tons of NOx reduced (2nd Priority)
 - Cost per ton of PM reduced (3rd Priority)
 - Total tons of PM reduced (4th Priority)
- Primary operation in nonattainment area
- Date of project implementation
- Clearly identified funding needs, implementation procedures, and source(s) of local match
- Previous participation in RTC initiatives
 - Yes: to receive full points, project implementation was successful, completed on time and without significant changes to work scope, and was satisfactory overall.
 - No: will receive a neutral score as NCTCOG encourages new partnerships.
- Achieving the overall goals of the NCT Clean School Bus Program to advance the use of clean technologies, including the potential for the project to encourage others to use clean technology and to result in the wider use of clean technology in the region.

NCTCOG is not obligated to fund a proposal from an applicant that has demonstrated marginal or unsatisfactory performance on previous grants or contracts with NCTCOG and other State agencies. NCTCOG is not obligated to fund a proposal from an applicant based on a determination of the risks associated with the applicant, including the financial condition of the applicant and other risk factors as may be determined by NCTCOG.

Regardless of the scores and ranking assigned, NCTCOG may base funding decisions on other factors associated with best achieving the goals of the program, and NCTCOG is not obligated to select a project for funding. Additionally, NCTCOG may select parts of a proposal for funding and may offer to fund less than the dollar amount requested in a proposal.

GRANT ADMINISTRATION AND REIMBURSEMENT OF EXPENSES

Successful applicants will be notified by phone or other means of their selection and the amount of grant funds that may be awarded. Entities selected to receive grant funding will be required to execute a contract with NCTCOG. All services or work carried out under a contract awarded as a result of this call for projects must be completed within the scope, time frames, and funding limitations specified by the contract. Upon signature and execution of the contract by NCTCOG, a copy of the executed contract will be returned to the applicant, at which time the grant will be considered awarded. Purchase of new technology may not occur prior to the contract being fully executed.

Grants will be made on a reimbursement basis for eligible expenses incurred and paid by the grant recipient. A cost may not be considered incurred until the grant-funded technology has been received and accepted by the grant recipient. Requests for reimbursement shall include documentation to show that the vehicle/equipment has been received, the expenses have been incurred and paid by the grant recipient, and proper vehicle disposition has occurred.

Applicants that are successfully awarded funding through this call are obligated to fulfill the requirements of the contract, including surrendering all eligible State Implementation Plan credits to NCTCOG for the full activity life of the project.

REPORTING REQUIREMENTS

Award recipients must fulfill the annual compliance verification requirements of the Clean Fleet Vehicle Policy.

CONTACT INFORMATION

Please submit any questions or comments to:

E-mail: cleanschoolbus@nctcog.org

Web site: www.nctcog.org/cleanschoolbus

NCTCOG Project Staff:

Amanda Brimmer
Senior Transportation Planner
(817) 608-2354
abrimmer@nctcog.org

Whitney Ewerz
Transportation Planner I
(817) 608-2328
wewerz@nctcog.org

Carrie Reese
Program Manager
(817) 608-2353
creese@nctcog.org

REFERENCES

¹ California Environmental Protection Agency, Air Resources Board, *Staff Report: Proposed 2005-2006 Lower-Emissions School Bus Program Guidelines and Funding Allocation*. 01/24/06. www.arb.ca.gov/msprog/schoolbus/2006/stfrpt.pdf. 04/02/07.

² School Transportation News Media, *EPA Study Supports Anti-Idling Health Benefit for Students*, 03/20/07. www.stnonline.com/stn/top_stories/epa_idling_study032007.htm. 03/20/07.