



**North Central Texas
Council of Governments**

NORTH CENTRAL TEXAS CLEAN SCHOOL BUS PROGRAM



2007 CALL FOR PROJECTS

GUIDELINES

May 14, 2007

www.nctcog.org/cleanschoolbus

INTRODUCTION

The North Central Texas (NCT) Clean School Bus Program has been created to assist school districts and school bus operators in the North Central Texas region in reducing emissions and improving air quality. One segment of the program is providing 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 North Central Texas 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 (NOx) 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 emission reduction measures are being implemented to reduce the emissions that contribute to ozone formation.

One of these measures is to reduce emissions from school bus fleets. The Texas Department of Transportation registration data from 2005 indicates there are close to 4100 school buses in the DFW nine-county nonattainment area which, when combined, emit over 2.45 tons per day of NOx and 0.16 tons per day of VOCs. Nearly 20 percent of school buses are over a decade old, meaning they pre-date current air pollution control requirements. The replacement, repower or retrofit of 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 North Central Texas area not only to improve air quality, but also to protect the health and wellbeing of school aged children. Health studies have concluded that children's health is considerably more at risk of being adversely affected by air pollution than that of adults. Numerous studies have been conducted regarding the effects of school bus exhaust pollution on children and the 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 2007 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 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. Only 20 percent the total funding may be administered in the seven counties classified as attainment.

The Clean Fleet Vehicle Policy is a model ordinance that addresses ways fleets can have a positive impact on air quality through vehicle acquisition, maintenance, operations, and compliance verification. This also includes restrictions on vehicle idling and requirements for driver training. Policy adoption must occur prior to the closing of this call for projects. Adoption includes submitting a signed copy of the policy 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. Each 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 emphasis area due to being a precursor to ozone formation. This call is fuel and technology neutral.

Eligible projects include:

Vehicle Replacement - replacement of a school bus with a new or newer model year school bus.

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

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

Funding awards may not exceed a set percentage of 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%
- Engine Repower Projects – 50%
- Engine Retrofit Projects – 80%

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

- EPA - www.epa.gov/otaq/retrofit/retroverifiedlist.htm
- CARB - www.arb.ca.gov/diesel/verdev/vt/cvt.htm

Current as of May 14, 2007, EPA and CARB verified technologies with a reduction in NOx emissions of 25 percent or greater are listed 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, school buses with engines manufactured prior to 1993 are best candidates for vehicle replacement or engine repower. Vehicles with engines manufactured after 1993 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 level.	

REQUIREMENTS

Projects must be implemented between November 2007 and September 2009. 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 for this number of years. School buses must continue to operate within the counties of operation stated in the application for the entire approved activity life of the grant.

VEHICLE AND ENGINE DISPOSTION

Vehicles and engines being replaced must be rendered permanently inoperable and disposed of in an environmentally responsible manner. This includes drilling a hole in the engine block, cutting the frame of the chassis, and recycling salvageable materials. Documentation of disposition, including before and after photographs, will be required upon request for reimbursement.

SCHEDULE

Task	Estimated Timeframe
Call for Projects Opens	May 14, 2007
Workshop	May 22, 2007
Call for Projects Deadline	June 22, 2007 – 5 p.m. CDT
Evaluate & Select Proposals	June - July 2007
Announce Awarded Projects	October 2007
Technology Procurement & Installation	November 2007 - September 2009

APPLICATION PROCESS

To apply for funding, applicants must submit a complete grant application, including bids for new vehicles and/or equipment. Application forms and other materials for the 2007 Call for Projects may be downloaded from the NCT Clean School Bus Program website 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. CDT on Friday, June 22, 2007. In accordance with the call for projects procedures established by the Regional Transportation Council Bylaws, NCTCOG must have the submitted application “in hand” at the NCTCOG offices by the application 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 application deadline. Applicants are encouraged to submit their applications far enough in advance of the submission deadline to allow NCTCOG staff to review applications for completeness.

Submit three (3) hard copies and one (1) electronic copy (on compact disc) of the completed application to:

Regular mail:

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

or

Physical location:

North Central Texas Council of Governments
Transportation Department
Attn: Carrie Reese
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 items.

Factors that will be used to evaluate applications include:

- Date of Project Implementation and Completion (November 2007 – August 2009)
- Adoption of Clean Fleet Vehicle Policy by 6/22/07
- Percent Time of Operation Within Nonattainment Area
- Cost Per Ton
 - NOx (Primary Focus)
 - PM (Secondary Focus)

- 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 the technology and to result in the wider use of the 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 and 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.

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 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.

REPORTING REQUIREMENTS

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

CONTACT INFORMATION

Website: www.nctcog.org/cleanschoolbus

NCTCOG Project Staff:

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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.