



**NORTH CENTRAL TEXAS
CLEAN SCHOOL BUS PROGRAM**

2015 CALL FOR PROJECTS

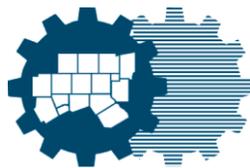
GUIDELINES

January 5, 2015

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**North Central Texas
Council of Governments**

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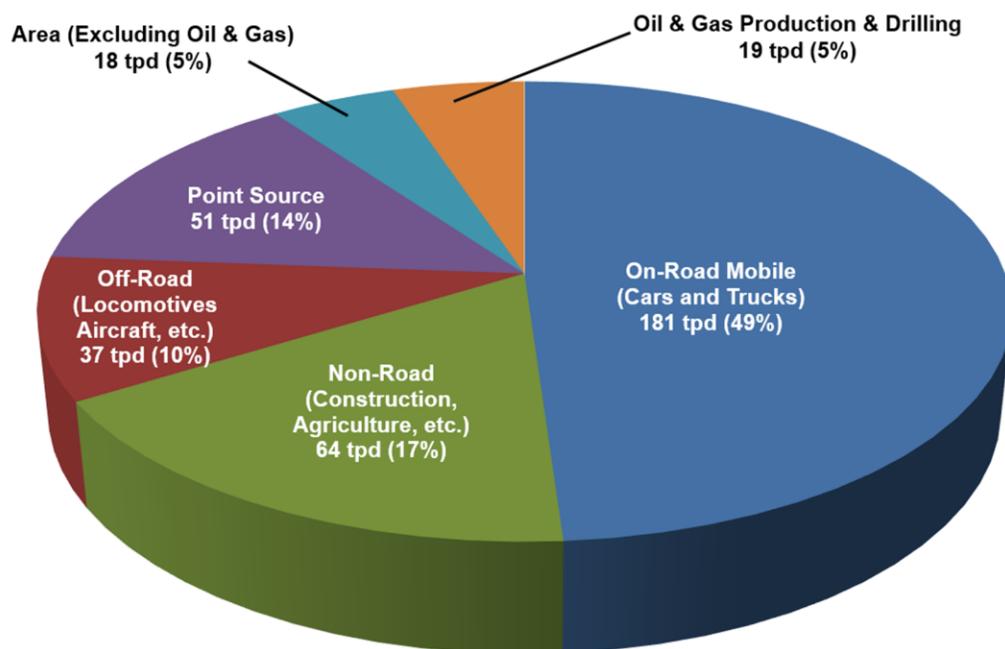
INTRODUCTION

The North Central Texas Clean School Bus (NCTCSB) Program helps schools in the Dallas-Fort Worth (DFW) region reduce emissions from school bus fleets and improve air quality at school campuses in order to both reduce health impacts associated with poor air quality and support regional efforts to attain federal air quality standards. The Program is fuel- and technology- neutral and seeks to expand the use of cleaner school bus technologies. The NCTCSB Program Call for Projects (CFP) provides financial assistance for projects that reduce oxides of nitrogen (NO_x) emissions by retrofitting, repowering, and replacing high-emitting buses, and installing idle reduction technology. The 2015 CFP is made possible through use of Congestion Mitigation and Air Quality Improvement (CMAQ) Program and Texas Commission on Environmental Quality (TCEQ) Supplemental Environmental Project (SEP) funds.

PURPOSE

Ten counties in the North Central Texas region are classified as moderate nonattainment under the 2008 8-hour ozone standard, meaning the air quality in these counties does not meet the Environmental Protection Agency's (EPA) National Ambient Air Quality Standard (NAAQS) for ozone. Ozone is formed when NO_x and volatile organic compounds (VOC) mix in the presence of sunlight and heat. Programs to reduce NO_x emissions from mobile sources, which comprise approximately 76 percent of ozone forming pollutants, are an important element of working toward ozone attainment. Breathing ground-level ozone can result in a number of health effects that are observed in broad segments of the population. Evidence from observational studies indicates that higher daily ozone concentrations are associated with increased hospital admissions and other markers of morbidity¹.

Exhibit 1: 2012 Estimated NO_x Emission Inventory



Source: Texas Commission on Environmental Quality, 2012 Dallas-Fort Worth 8-hour Ozone Attainment Demonstration State Implementation Plan

On November 25, 2014, the EPA issued a proposal to further lower the federal ozone standard. This announcement highlights that efforts to reduce ozone-forming emissions will remain critically important to the region.

In addition, exposure to high concentrations of diesel exhaust from school bus engines and idling vehicles are known to disproportionately affect children’s health. Particulate matter from older diesel school bus engines have been shown to aggravate asthma, cause lung inflammation and lead to heart problems. The World Health Organization has formally classified diesel engine exhaust as carcinogenic to humans and has been shown to be an endocrine disruptor in school-aged children². According to the California Air Resources Board (CARB), school bus trips can increase children’s daily exposure to black carbon up to 34 percent compared to regular passenger cars and particle matter (PM) levels inside a school bus spike to 5-10 times the levels outside the bus². One goal of the NCTCSB Program is to reduce harmful emissions in school buses currently in operation for students in the 10-county ozone nonattainment region.

CONTACT INFORMATION

Please submit any questions or comments to:

Email: CleanSchoolBus@nctcog.org
 Website: www.nctcog.org/CleanSchoolBus

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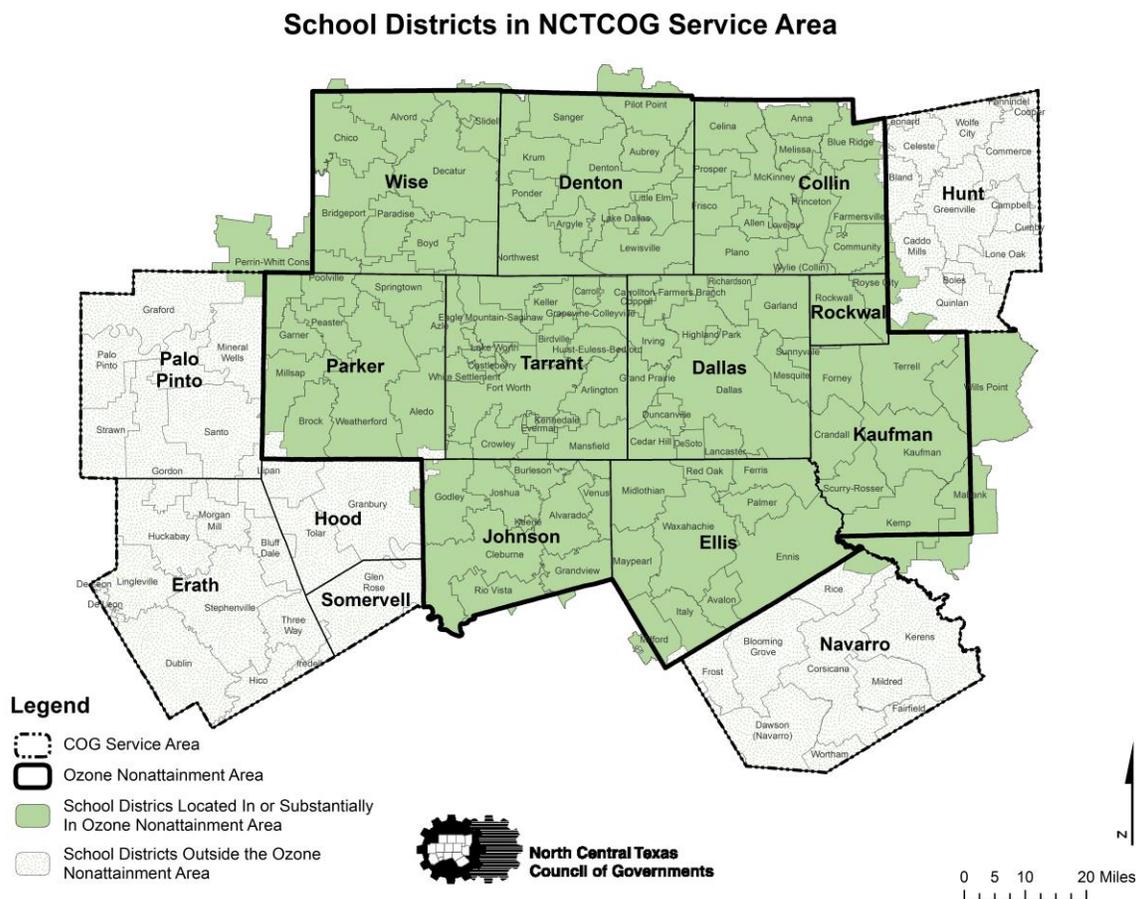
SCHEDULE

Milestone	Estimated Timeframe
Call for Projects Opens	January 5, 2015
CFP Workshop/Webinar	January 20, 2015 2:00 pm Central Time
Call for Projects Application Deadline & Clean Fleet Policy Adoption Deadline	March 13, 2015 5:00 pm Central Time
Proposals Evaluated & Selected	March/April 2015
Awarded Projects Announced	Summer 2015
Awardees to Receive Agreements and Begin Purchasing	Spring/Summer 2015
Project Implementation Deadline	July 1, 2016

ELIGIBLE ENTITIES

This CFP is open to public and private schools, school districts, and school bus operators with operations in the ten counties currently classified as nonattainment for the pollutant ozone; this includes Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise. Eligible districts are outlined in the following map, which is also located at www.nctcog.org/CleanSchoolBus. Districts whose boundaries are partially in the nonattainment area are eligible as long as the buses included in the application travel predominantly within the 10-county nonattainment area.

Exhibit 1: School Districts in the NCTCOG Service Area*



*Click image for a more detailed map online.

Entities that wish to apply must adopt the Regional Transportation Council's (RTC) Clean Fleet Policy, as approved on December 11, 2014, and submit a signed copy of the policy to NCTCOG offices by the March 13, 2015, application deadline. The Clean Fleet Policy provides guidance related to reducing fleet emissions and overall fuel consumption, partnering with NCTCOG and DFW Clean Cities, and ensuring fleet personnel are familiar with air quality and petroleum reduction goals. Adopting entities must maintain policy compliance by adopting the Clean Fleet Policy, implementing an idle reduction policy or standard operating procedure, and submitting annual fleet policy reporting, to be eligible for future funding. For more information, please visit: www.nctcog.org/FleetPolicy.

ELIGIBLE PROJECTS AND COSTS

All projects must impact emissions from vehicles currently in use as school buses (that is, regularly used for student transportation). All projects are eligible to receive grants of up to 80 percent of the incremental cost of the activity. Additional requirements for specific project types are outlined as follows:

1. Vehicle Replacement – replacement of an older school bus with a newer model year school bus; including an alternative fuel or an advanced technology school bus

Project Eligibility:

- New bus must remain operational for at least five years
- Engines must be EPA or CARB certified for model year 2014 or later. Lists of certified engines can be found at:
 - EPA – <http://www.epa.gov/otaq/certdata.htm>
 - CARB – <http://www.arb.ca.gov/msprog/onroad/cert/cert.php>
 - Click on “Executive Orders Listing”; most school bus engines will fall into the “HDE-HDV_MDE” column.
- New bus must reduce NO_x emissions.
- New bus must perform the same function and have a similar gross vehicle weight rating as the bus being replaced.
- The old bus and engine must be scrapped and the new engine must be of comparable horsepower.
- Replacements that would have occurred through normal fleet turnover are not eligible for funding under this program. The old bus or engine must have been scheduled to remain operational in the fleet for a minimum of five more years if grant funding were not available. Prior to award, NCTCOG may require a third-party mechanic to verify remaining useful vehicle or engine life.

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

Project Eligibility:

- Engines must be EPA or CARB certified for model year 2014 or later. Lists of certified engines can be found at:
 - EPA – <http://www.epa.gov/otaq/certdata.htm>
 - CARB – <http://www.arb.ca.gov/msprog/onroad/cert/cert.php>
- The engine being replaced must be scrapped and the new engine must be of comparable horsepower.
- Repowers that would have occurred through normal fleet turnover are not eligible for funding under this program. The old bus or engine must have been scheduled to remain operational in the fleet for a minimum of five more years if grant funding were not available. Prior to award, NCTCOG may require a third-party mechanic to verify remaining useful bus and/or engine life.

3. Engine Conversion – reconfiguration of existing engine to run on fuels different than the ones for which they were originally designed.

Project Eligibility:

- Conversion kit must remain operational for at least five years.
- Conversion kit must be EPA or CARB certified for the specific engine on which installation is planned. Lists of conversion kits can be found at:
 - EPA – iaspub.epa.gov/otaqpub/

- Under “Compliance Document Type” choose “Certificates of Conformity” from the drop-down menu.

CARB – www.arb.ca.gov/msprog/aftermkt/altfuel/altfuel.htm

4. **Retrofit** – installation of verified emission control equipment to an existing engine or exhaust system.

Project Eligibility:

- Must remain operational for at least five years.
- Must reduce NO_x emissions.
- Technologies must be EPA or CARB verified. Lists of approved retrofit technologies can be found at:

EPA – epa.gov/cleandiesel/verification/verif-list.htm

CARB – www.arb.ca.gov/diesel/verdev/vt/cvt.htm

5. **Idle Reduction** – installation of a device that provides resources needed during idle time, such as climate control, in a way that allows the primary engine to be turned off.

Project Eligibility:

- Must remain operational for at least three years.
- Must achieve a reduction in NO_x emissions.
- Technologies must be EPA verified. Information on verified idle reduction systems can be found at www.epa.gov/smartway/forpartners/technology.htm

INELIGIBLE COSTS

Ineligible costs include:

- Fees associated with Buy Boards and financing.
- Administrative costs and other internal costs of the grant recipient including, but not limited to, personnel expenses, internal salaries, indirect costs, and travel.
- Fees for a third-party consultant or dealer hired to coordinate the application or manage and administer grant-funded activities, including coordination of the work and submission of reports and paperwork. This restriction is not intended to limit the ability of the equipment supplier or installer to include reasonable and necessary costs for managing the work to be performed in the price of the vehicle, equipment, or installation services. The costs for professional services, including engineering and technical work, required for completion of the activity may be included, subject to the restrictions pertaining to that type of project. Per the Uniform Grant Management Standards, the cost-plus-percentage-of-cost method of contracting for professional services shall not be used.

APPLICATION REQUIREMENTS

Projects must comply with the following to be considered for funding

- **Clean Fleet Policy:** To be eligible, applicants must adopt the Clean Fleet Policy as approved by RTC on December 11, 2014, prior to the application deadline of March 13, 2015, at 5:00 pm Central Time and be in compliance with annual reporting requirements. A copy of the newly adopted policy must be submitted as an attachment to the Application.

- **Cost Estimate**: Applicants must submit a cost estimate for each project type, which will be the basis for determining the maximum grant award amount based on applicable funding thresholds. Submission of a cost estimate does not necessarily constitute fulfillment of applicant's procurement responsibilities. For more information on procurement, see *Procurement Requirements* on page ten (10) and Appendix D.
- **DUNS Number**: Applicants are required to provide a Dun and Bradstreet (D&B) Data Universal Numbering System (DUNS) number. Applicants can receive a DUNS number at no cost by calling the toll-free DUNS Number request line at 1-866-705-5711, or visiting the D&B Website at www.dnb.com/us/. If a DUNS number has not yet been assigned, please include the date the applicant requested a number.
- **EPA/CARB Certification or Verification Documentation**: Conversions, retrofits, and idle reduction projects must use EPA/CARB certified or verified technologies and include a copy of EPA or CARB certification from the appropriate website listed on page six (6).
- **Expedited Fleet Turnover**: Grant funds may not be used to fund replacement or repower projects that would have occurred through the normal attrition of vehicles or to provide funds for expanding a fleet. Normal attrition is defined as a replacement or repower scheduled to take place between now and the end of the Activity Life. Normal attrition is determined by the vehicle or fleet owner's budget plan, operating plan, standard procedures, or retirement schedule. For example, if a school bus fleet typically retires vehicles after 20 years, a bus currently in its 18th or 19th year of service is not eligible for replacement. A bus currently in its 15th year of service and thus has five years of useful life remaining (as defined by the fleet's retirement schedule) is eligible for replacement. A fleet turnover schedule must be provided as part of the application. See examples of fleet turnover schedules at www.nctcog.org/CleanSchoolBus. The schedule must reflect 15 years (e.g. 2000-2015) to demonstrate average fleet turnover. A copy of any written fleet turnover schedule or fleet replacement policy should be included as an attachment.
- **Financial Disclosure**: Applicants must notify NCTCOG of the value of any existing financial incentives that directly reduce the cost of the proposed activity, including tax credits or deductions, other grants, anticipated scrap value, or any other public financial assistance, to allow for accurate calculation of incremental cost.
- **Local Match**: Applicants must identify local match sources, which must fund at least 20 percent of total project cost. Matching funds must not already be tied to emission reduction commitments (i.e. funding from the Texas Emissions Reduction Plan (TERP) may not be used as matching funds).
- **Project Type**: Projects must involve a school bus replacement, repower, retrofit or conversion, or installation of idle reduction technology, and must achieve a reduction in NO_x emissions.
- **Voluntary Reductions**: Projects must be voluntary in nature and not required by any local, state, or federal law, rule, regulation, memorandum of agreement, or other legally binding document.

APPLICATION PROCESS

Application forms are available at www.nctcog.org/CleanSchoolBus. Applications must include original signatures from the applicant's Authorized Official on the certification statements in Part 4 of the application.

Applications for the North Central Texas Clean School Bus Program 2015 Call for Projects must be received “in-hand” by 5 pm Central Time on March 13, 2015. Mailed applications which are postmarked by this time but have not yet been received are not considered “in-hand” and will be classified as a late submittal. Late submittals will not be accepted under any circumstances. Mail will be returned, unopened. Applications must be in a sealed envelope with a return address on the outside. Faxed applications will not be accepted.

Applications should be mailed or delivered to the following address:

North Central Texas Council of Governments
Transportation Department
North Central Texas Clean School Bus Program
Attention: Heather Davis
616 Six Flags Drive
Arlington, TX 76011

Applicants are strongly encouraged to also email the application file, with attachments, to cleanschoolbus@nctcog.org. Applicants are encouraged to submit in advance of the submission deadline to allow staff time to review for completeness. A checklist of required materials is included in the Application in the “AppInstructions” tab. Applicants should carefully review this checklist to ensure that all required materials are included with the application at the time of submittal.

- **Application Checklist:** All of the items listed below need to be “in hand” by the application deadline for a project to be deemed complete.
 - Completed Application Form (including Part 1, Part 2, Part 3 tabs as appropriate, and Part 4)
 - Cost Estimates
 - Copy of adopted Clean Fleet Policy
 - Fleet Turnover Schedule (for Replacement and Repower activities only)
 - Copy of, or link to, fleet replacement schedule or policy (for Replacement and Repower activities only)
 - Copy of EPA or CARB certification or verification (for Conversion, Retrofit, or Idle Reduction activities only)

Supplemental information which is material to the application will not be accepted after the application deadline. Non-material omissions will not constitute an incomplete application.

Note: If the applicant is applying for funding for more than one model of school bus, cost estimates must be submitted for each type of bus.

CONSULTANTS

Private consultants may be available to assist in completing and submitting an application. These consultants do not represent NCTCOG, and NCTCOG neither encourages nor discourages the use of a consultant to assist with the application process. NCTCOG has no agreement with any consultant and applications submitted by a particular consultant will not receive any more favorable treatment than other applications. Fees charged by a consultant are the responsibility of the applicant and may not be charged to the grant, either directly or as an addition to the cost basis of the grant-funded equipment.

SELECTION CRITERIA

NCTCOG will evaluate and rank eligible applications based on the following criteria:

- Quantitative Analysis:
 - Cost per ton of NO_x reduced
- Qualitative Assessment:
 - Multipollutant Emission Benefits
 - Cost per ton of VOC reduced
 - Cost per ton of Particulate Matter reduced
 - Cost per ton of carbon dioxide emissions reduced
 - Cost per gallon petroleum reduced
 - Partnership
 - Previous participation in RTC initiatives
 - Feasibility/risk
 - Readiness for implementation
 - Clearly identified funding needs, implementation procedures, and sources of local match
 - Degree to which previously funded projects were successfully completed on time, without significant changes to work scope, and in an overall satisfactory manner.
 - Innovative Project Types
 - Potential for a project to demonstrate feasibility of new technologies not yet used in the NCTCOG 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/or other state or federal agencies. NCTCOG is not obligated to fund a proposal from an applicant based on a determination of the risks, including the financial condition of the applicant and other risk factors as may be determined by NCTCOG.

NCTCOG may base funding decisions on factors associated with best achieving the goals of the program, and is not obligated to select a project for funding. Additionally, NCTCOG may select parts of an application for funding or offer to fund less than the amount requested in an application.

GRANT ADMINISTRATION AND REIMBURSEMENT OF EXPENSES

Successful applicants will be notified of their selection and grant fund amounts awarded. Entities selected to receive grant funding will be required to execute an agreement with NCTCOG in order to receive grant funding. Services or work carried out under an agreement awarded as a result of this CFP must be completed within the scope of work, timeframe, and funding limitations specified by the agreement. A Notice to Proceed will be provided to awarded applicants; at that time, project implementation can commence, and costs may begin to be incurred. **Under no circumstances will reimbursement be made for costs incurred prior to the date of the Notice to Proceed.** Upon signature and execution of the agreement by NCTCOG, a copy of the executed agreement will be returned to the applicant.

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 vehicle or technology has been paid for by the grant recipient. Requests for reimbursement shall include

documentation to show that the vehicle or equipment has been received, expenses paid by the grant recipient, and proper vehicle disposition has occurred (if applicable). Recipients will also have the option to assign their grant payments directly to a dealer or service provider. Reimbursement request forms are available at www.nctcog.org/aqfunding/forms.asp

To further enhance the partnership and market emission reduction efforts, the grant recipient must agree to place a label on grant-funded vehicles or equipment if requested by NCTCOG.

Awarded applicants are obligated to fulfill agreement requirements including, but not limited to, achievement of semi-annual usage requirements, surrender of eligible emissions credits, and completion of reporting requirements to NCTCOG for the Activity Life of the project. Failure to comply with these requirements may result in return of all or a pro-rata share of the grant funds to NCTCOG.

PROJECT IMPLEMENTATION REQUIREMENTS

Applicants selected for funding must adhere to certain requirements as they complete their project and will be bound to certain obligations. Requirements and obligations include:

- **Activity Life:** The minimum number of years the applicant must operate the new vehicle/engine/technology in the fleet and report usage to NCTCOG. For replacement/repower projects, the Activity Life represents the number of years the applicant would have continued to operate the existing vehicle or engine had grant funds not been available. NCTCOG may require a third-party mechanic to verify vehicle/engine remaining useful life. Minimum Activity Life for each project type is as follows:
 - Replacements: five years
 - Repowers: five years
 - Retrofits: five years
 - Idle Reduction Technology: three years
- **Bus or Engine Disposition:** Buses and engines being replaced must be rendered permanently inoperable and disposed of in an environmentally responsible manner in accordance with local disposal laws. This includes drilling a three-inch hole in the engine block, cutting the frame of the chassis in a wedge 75 percent of the way through, and recycling salvageable materials by sending retired asset to a scrappage or remanufacturing facility. Other permanent destruction methods may be allowable upon approval by NCTCOG. The facility must be operated or authorized by the original engine manufacturer to remanufacture the engine. The process includes removing all parts and using the old block to build a remanufactured engine with a new serial number. Documentation of disposition, including before and after photographs, will be required for reimbursement. NCTCOG staff will be available, upon request, to witness vehicle and/or engine destruction if so desired.
- **Buy America:** If projects include the purchase of buses with integrated idle reduction technologies, Buy America requirements under 23 USC 313 and 23 CFR 635.410, which require a domestic manufacturing process for any steel or iron products, may apply. A Buy America Certification form is available for review at www.nctcog.org/aqfunding/forms and is enclosed as Appendix B.
- **Emissions Credit:** Applicants must surrender emissions reductions to NCTCOG to meet air quality requirements and goals. The recipient may not utilize emissions reduction to satisfy other air quality commitments.

- **Geographic Area:** All grant-funded buses and technologies must be utilized predominantly in the 10-county DFW ozone nonattainment area, as outlined on page three (3), throughout the Activity Life.
- **Global Positioning System (GPS) Requirement:** All recipients will be required to install GPS on grant-funded vehicles or equipment to facilitate required usage reporting. The cost of the GPS system will be considered a grant-eligible expense and may be reimbursed with grant funds. Recipients will be required to either use a GPS vendor selected by NCTCOG or, if the recipient already uses GPS on its bus fleet, to grant NCTCOG sufficient access to the data to fulfill usage reporting requirement needs.
- **Notification:** Recipients must agree to notify NCTCOG of changes in the following during the Activity Life: termination of use, change in use or location, sale, transfer, or accidental or intentional destruction of grant-funded vehicles or equipment.
- **Procurement:** Awarded applicants must demonstrate an open, fair, and competitive procurement or purchasing process in compliance with state and federal law. NCTCOG has adopted Third Party Procurement Procedures to assist awarded applicants (attached as Appendix D). In summary, these procedures require that awardees:
 - maintain a written code of conduct related to contract award and administration;
 - maintain a contract administration system to ensure vendors and contractors perform according to the terms;
 - conduct procurement transactions in an open, fair, and competitive manner; and
 - maintain written procurement procedures

Appendix D provides guidance on the requirements for each type of procurement by dollar threshold. For example, purchases exceeding \$100,000 require NCTCOG's advanced approval of the proposed procurement process. Appendix C provides a checklist that NCTCOG uses to determine whether awardees have complied with the procurement requirements. NCTCOG staff is available to assist awarded applicants with any questions. Applicants are encouraged to review these procedures carefully prior to applying.

- **Program Income:** Any funds received for scrapped equipment or engines will be treated as program income, which may include deducting scrap value from the total project cost for the purposes of calculating total eligible grant amount, or using scrap value as part of the applicant's required cost share. Applicants may be required to report scrap value when requesting reimbursement for implemented activities, or to retain scrapped equipment for internal use.
- **Project Dates:** Projects must be implemented between summer 2015 and July 1, 2016. Grant recipients will be notified of award in summer 2015, with a Notice to Proceed provided soon thereafter. Grant recipients are not permitted to incur approved costs until Notice to Proceed is received.
- **Reporting Requirements:** Award recipients must commit to submitting reports regarding project status for the duration of the Activity Life. Failure to submit these reports pertaining to grant-funded activities may be grounds for termination of Agreement and/or return of grant funds.
 - **Quarterly Progress Report:** All recipients must submit reports detailing progress toward project completion on a quarterly basis until final reimbursement is issued. A template will be provided by NCTCOG.
 - **Semi-Annual Usage Report:** A Semi-Annual Usage Report must be submitted by January 15th and July 15th for the duration of the approved Activity Life.

Required reporting will include information similar to the following, for each activity:

- Hours Logged on the Idle Reduction Vehicle/Technology for the Six-Month Reporting Period.
- Cumulative hours Logged on the Idle Reduction Vehicle/Technology
- Percent of Time Operating in DFW Ozone Nonattainment Area for the Six-Month Reporting Period.
- Operational Issues or Changes (if any, such as significant maintenance concerns, repair needs, etc.)

Usage reporting will be completed online through the NCTCOG website (www.nctcog.org/aqfunding/reporting). A username and password will be provided prior to the end of the first reporting period.

- *Written Certification of Disposition:* To comply with federal Property Management requirements, the applicant must provide to NCTCOG a written certification of the disposition of grant-funded vehicle or equipment at the end of the Activity Life or upon transfer of ownership. The certification shall describe the continued use and condition of the vehicle or equipment, fair market value, remaining useful life, and any actual or anticipated improvements that may increase the value of the vehicle or equipment.

REFERENCES

- ¹ Environmental Protection Agency, *Health Effects of Ozone in the General Population*, 12/31/2014. <http://www.epa.gov/apti/ozonehealth/population.html>
- ² Environmental Defense Fund, *Evaluation of Clean School Bus Programs in Texas*, 12/31/2014. http://www.edf.org/sites/default/files/cleanbuses_14_screen.pdf
- ³ 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.

APPENDIX A: Verified Retrofit and Idle Reduction Technologies

Applicants are encouraged to consult the websites listed in the Guidelines on pages four (4) and five (5) for information on different companies and products.

Exhibit 1: Verified Retrofit Technologies with NO_x Emissions Reductions

(Note: Due to changes in emission controls over time, retrofits maybe better suited for buses with engines manufactured prior to 1993.)

Manufacturer	Technology	Applicability	NO _x Reduction (%)
ESW CleanTech Longview	Lean NO _x Catalyst and DPF	1993-2006 model year on-road; CARB diesel; biodiesel.	25
International Truck & Engine Corp.	Green Diesel Technology-Low NO _x 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	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	40
Johnson Matthey	Selective Catalytic Reduction Technology (SCRT)	On-highway, 4-cycle, non-EGR, 250-500 hp heavy-duty diesel engines, originally manufactured from model years 1994 through 2002.	70
Johnson Matthey	Selective Catalytic Reduction Technology (SCCRT)	On-highway, 4-cycle, EGR and non-EGR, 250-500 hp heavy-duty diesel engines, originally manufactured from model years 1998 through 2006	70
Lubrizol PuriNOx	Emulsified Fuel	1996-2003 on-road	15

Exhibit 2: Verified Idle Reduction Technologies for School Buses

Manufacturer	Technology	Product
Espar Heater Systems	Fuel-Operated Heaters	E-Guardian 5 (Hydronic D5) E-Guardian 8 (Hydronic D8) E-Guardian 10 (Hydronic D10) E-Guardian 12 (Hydronic D12), and Airtronic D2 Airtronic D4 Airtronic D5
Proheat	Fuel-Operated Heaters	Proheat X45
Webasto	Fuel-Operated Heaters	Thermo Top C/Z Coolant Heater (TSL 17) Scholastic Series Heaters (DBW 2010)

APPENDIX C: Subgrantee Procurement Review Checklist

Grant Name and Number: _____
 Subgrantee: _____
 Subgrantee Federal Award: _____
 Total Project Cost: _____

Procurement Requirements	Yes	No
1. Does the subgrantee have a written code of conduct for procurement officials?		
2. Does the subgrantee have a contract administration system in place to ensure compliance with procurement procedures?		
3. Are the following documents included in the subgrantee's contract administration system?		
a. Written Procurement History (including rationale used for procurement method, selection process, methodology used to select vendor)		
b. Solicitation Documentation		
c. Purchase Order / Contract		
d. Invoice		
e. Proof of Payment		
f. NCTCOG Pre-approval (if applicable)		

Item(s) Procured	Purchase Price	Procurement Method Used*

List of Procurement Methods:

1. Purchases < \$3,000
2. Purchases > \$3,000 but < \$100,000
3. Purchases > \$100,000 – Sealed Bid (Publicly advertised, requires NCTCOG pre-approval)
4. Purchases > \$100,000 – Competitive Proposal (Publicly advertised, requires NCTCOG pre-approval)
5. Sole Source (Requires NCTCOG pre-approval)
6. Emergency Procurement (Requires NCTCOG pre-approval)
7. State Contract
8. Other – Please Explain

Notes: _____

APPENDIX D: NCTCOG Third-Party Procurement Procedures