



**North Central Texas  
Council of Governments**

## **TEXAS EMISSIONS REDUCTION PLAN (TERP)**

### **REGIONAL REFUSE HAULER PROGRAM**

#### **Call For Projects Guidelines**

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**NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS  
REGIONAL REFUSE HAULER PROGRAM  
CALL FOR PROJECTS GUIDELINES**

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## **GUIDELINES**

These guidelines for the North Central Texas Regional Refuse Hauler Program are adapted from and in compliance with the *Texas Emissions Reduction Plan: Guidelines for Emission Reduction Incentives Grants*, May 2004 ([http://www.tceq.state.tx.us/comm\\_exec/forms\\_pubs/pubs/rq/rg-388.html](http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/rq/rg-388.html)).

## **PROGRAM FOUNDATION**

These guidelines contain the criteria for grants under the North Central Texas Regional Refuse Hauler Program in compliance with the Texas Emissions Reduction Plan (TERP), authorized under Chapter 386, Subchapter C of the Texas Health and Safety Code. The Texas Commission on Environmental Quality (TCEQ) has adopted rules to implement the TERP program under 30 Texas Administrative Code (TAC) Chapter 114, Subchapter K.

## **PURPOSE**

TERP was established by the Texas Legislature to provide monetary incentives for projects to improve air quality in the state's nonattainment areas. These areas have been determined to not meet certain air quality standards established by the Environmental Protection Agency (EPA). Other eligible counties of the state that may face air quality challenges in the future are also eligible for incentives under this program.

These guidelines establish the standards and criteria for TERP grants issued by the North Central Texas Regional Refuse Hauler Program. Along with the statutory and regulatory provisions applicable to this program, recipients of incentive funding must adhere to the criteria set forth in these guidelines.

## **HOW TO CONTACT US**

Interested entities should visit our Web site for information about the North Central Texas Regional Refuse Hauler Program at [www.nctcog.org/refuse](http://www.nctcog.org/refuse). The Web site also contains copies of this guidance document, the Regional Refuse Hauler Technical Supplement to the guidelines and the application forms, as well as other information that may be helpful to a potential applicant.

NCTCOG staff is available to answer questions about this program and to assist you if you are unable to access the Web site. If you are unclear about whether your proposed project would qualify for a grant, please feel free to contact us to discuss the project.

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## **DEFINITIONS**

Terms as they are defined in the Texas Health and Safety Code, Chapter 386, and the TCEQ rules (30 TAC §114.620) apply to this program, except as such terms are further defined and have the meanings as explained below.

1. **Cost-effectiveness** The total dollar amount expended, adjusted using a discount rate of 3 percent per year, divided by the total number of tons of reductions in nitrogen oxide emissions attributable to that expenditure.
2. **Incremental cost** The cost of an applicant's project, less a baseline cost that would otherwise be incurred by an applicant in the normal course of business, and may include added lease or fuel costs, as well as additional capital costs.
3. **On-road heavy-duty vehicle** An on-road motor vehicle that has a gross vehicle weight rating of 8,500 pounds or more.
4. **New Purchase/Lease** To purchase or lease a new vehicle with an engine that exceeds the current day NOx emission standard of 2.375 g/bhp-hr.
5. **Repower** To replace an old engine with a new engine, a used engine, a re-manufactured engine or electric motors, drives, or fuel cells.
6. **Replace** To replace an existing vehicle with a new or used vehicle.
7. **Retrofit** To equip an engine and/or fuel system with new emissions-reducing parts or technology after the manufacture of the original engine and/or fuel system.

## **ELIGIBLE APPLICANTS**

Applicants are potentially eligible for incentive funding if they operate or plan to operate on-road heavy-duty refuse vehicles primarily in one or more of the North Central Texas Nonattainment and Affected Counties of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall or Tarrant.

## **ELIGIBLE ACTIVITIES**

Activities eligible for funding under this program are intended to reduce nitrogen oxide (NOx) emissions in eligible counties. NOx is usually a by-product of high-temperature combustion. Everyday functions, like driving a motor vehicle or operating heavy equipment, contribute to the creation of NOx. It reacts with volatile organic compounds (VOCs) in the presence of sunlight to form harmful ground-level ozone.

Activities that may be eligible under this program are outlined below.

On-road heavy-duty refuse vehicles (8,500 lb or more)

- New Purchase or lease
- Replacement
- Repower
- Retrofit or add-on of emission-reduction technology

## **ON-ROAD HEAVY-DUTY REFUSE VEHICLES**

For the purposes of the TERP, vehicles with a gross vehicle weight rating (GVWR) of greater than 8,500 lbs are considered to be heavy-duty vehicles. The majority of these vehicles are powered by compression-ignition (CI) internal combustion engines, which typically use diesel fuel. However, to the extent vehicles using other fuels qualify under the program criteria, those vehicles may also be eligible for funding.

The methods for calculating the NOx emission reductions for an on-road vehicle project are included in these guidelines. Most of the calculations will require input of a NOx emission factor applicable to the engine and/or vehicle. The emission standards and emission factors applicable to this program are provided in the North Central Texas Regional Refuse Hauler Technical Supplement, which will be made available in conjunction with these guidelines. Examples of the calculations will also be available in the supplement. Potential grant applicants should contact NCTCOG for copies of the supplement and for questions about the applicable emission standards and emission factors.

## **ELIGIBLE ACTIVITIES AND COSTS**

On-road heavy-duty vehicles with a gross vehicle weight rating (GVWR) of 8,500 lb or more are eligible for grants under this program. The eligible activities and costs under each project category are explained in this section.

### **New Purchase or Lease of On-Road Heavy-Duty Refuse Vehicles**

This category is for the purchase or lease of new on-road heavy-duty refuse vehicles. For this category, NCTCOG does not consider whether the applicant is replacing an existing vehicle, and the baseline for comparison of emissions is the current federal NOx emission standard for that vehicle.

To be eligible for funding, the new vehicle must be certified to emit at least 25 percent less NOx than required under the current federal standard for that vehicle. Certification means approved by the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), or otherwise accepted by the TCEQ.

A *lease* is considered the use and control of a new on-road heavy-duty refuse vehicle, in accordance with a lease contract for a period of 12 or more consecutive months. NCTCOG will reimburse the incremental costs of the lease, not to exceed an incentive amount that results in a cost-effectiveness of \$5,000.00 or less per ton of NOx reduced. The incremental costs are those costs that are above the costs that would otherwise have been paid for the lease of a baseline vehicle.

A *purchase* is considered buying a new on-road heavy-duty refuse vehicle. NCTCOG will reimburse the incremental cost of the purchase, not to exceed an incentive amount that results in a cost-effectiveness of \$5,000.00 or less per ton of NOx reduced. The incremental cost is the difference between the manufacturer's suggested retail price (MSRP), the documented dealer price of a baseline vehicle, or other appropriate baseline cost established by the NCTCOG, and the actual cost of the cleaner vehicle.

For new purchases, not less than 75 percent of the annual use of the vehicle projected for the five years following the purchase must be projected to take place in one or more of the eligible counties. Leases must be for at least one year, and 75 percent of the annual use over the lease period must be projected to take place in one or more of the eligible counties. Either miles of operation or fuel consumption will measure annual use.

### **Replacement of On-Road Heavy-Duty Refuse Vehicles**

This category is for the replacement of an on-road heavy-duty refuse vehicle with a new or newer on-road heavy-duty vehicle.

For a replacement project, NCTCOG will evaluate whether the vehicle being replaced would have otherwise been used in the eligible counties for the period within which the emission reductions will be claimed. Standards that apply include all of the following:

1. The applicant must have owned the vehicle for a minimum of two years immediately preceding the grant application.
2. Unless otherwise approved, the vehicle must have been registered and used in Texas for the preceding two years.
3. The vehicle must be in operating condition, or, if repairs are needed, it must be shown that the vehicle can be repaired to operating condition.
4. The vehicle must have a current safety inspection (if a safety inspection is required for that vehicle and use).

Additional documentation to verify that the vehicle would have been used within the eligible counties may be required.

The replacement vehicle must be certified to emit at least 25 percent less NOx than the vehicle being replaced. Certification means approved by the EPA, the CARB, or otherwise accepted by the TCEQ.

The replacement vehicle should also be intended for use in the same application or vocation as the vehicle being replaced.

The applicant must agree to either destroy or render permanently inoperable the old vehicle (including the engine) within 90 days of purchasing the replacement vehicle. In lieu of scrapping the old vehicle, providing evidence that the vehicle will be transferred, sold, or otherwise disposed of outside of Texas, and will not be brought back into Texas, may be considered on a case-by-case basis. A certification of the disposition of the old vehicle must be provided, using forms provided by NCTCOG. In some cases, a certified or duplicate Texas Salvage Vehicle Title or Non-repairable Vehicle Title may be accepted as evidence that the vehicle has either been scrapped or designated for scrappage.

The grant recipient may be eligible for reimbursement of costs associated with the purchase or lease of the replacement vehicle, not to exceed an incentive amount that results in a cost-effectiveness of \$5,000.00 or less per ton of NOx reduced.

The total incentive amount also must not exceed the cost of the replacement vehicle, minus the scrappage value or, if approved, the trade-in or sale value of the old vehicle. If the vehicle is in need of repairs to bring it to operating condition, the estimated cost of those repairs must also be subtracted from the cost of the replacement vehicle, to determine the incremental cost that could be reimbursed.

Not less than 75 percent of the annual usage projected for the five years immediately following the purchase of the replacement vehicle must be projected to take place in one or more of the eligible counties. Either miles of operation or fuel consumption will measure annual usage.

### **Repower of On-Road Heavy-Duty Refuse Vehicles**

This category is for the replacements of an existing engine on an on-road heavy-duty refuse vehicle with a new, rebuilt, or remanufactured engine.

The engine must be certified to emit 25 percent less NOx than the engine being replaced, based on the federal standard for that engine. Certification means approved by the EPA, the CARB, or otherwise accepted by the TCEQ.

Repowers resulting in any alteration from an original configuration of a vehicle or engine must comply with the provisions of EPA Memorandum 1A (Memo 1A), related to ensuring that altered vehicles and engines continue to meet required emission standards. Copies of Memo 1A are available from the EPA and the TCEQ, and will be made available on the NCTCOG Web site.

Eligible rebuilt or remanufactured engines must use original engine manufacturer (OEM) components only and be purchased from the OEM or its authorized dealers and distributors. The NCTCOG may accept engines provided by other entities not connected with the OEM, subject to a case-by-case determination.

NCTCOG will reimburse the incremental cost of the purchase and installation of the replacement engine, not to exceed an incentive amount that results in a cost-effectiveness of \$5,000.00 or less per ton of NOx reduced. The incremental cost is the cost to purchase and install the replacement engine and associated equipment, minus the scrappage value, or, if approved, the trade-in or sale value of the old engine.

Expenses for in-house labor and travel will not be covered. Costs that may be reimbursed, subject to approval, include:

- invoice cost of the new engine, including sales tax and delivery charges;
- invoice cost of additional equipment that must be installed with the new engine;
- associated supplies directly related to the installation of the engine;
- costs to remove and dispose of the old engine;
- installation costs;
- reengineering costs, if the vehicle or equipment must be modified for the new engine to fit;
- and other costs directly related to the project, subject to approval.

The applicant must agree to either destroy or render permanently inoperable the old engine within 90 days of purchasing the replacing the engine. In lieu of scrapping the old engine, evidence that the engine will be transferred, sold, or otherwise disposed of outside of Texas, and will not be brought back into Texas may be considered. A certification of the disposition of the old vehicle must be provided.

Not less than 75 percent of the annual usage of the vehicle projected for the five years following the repower must be projected to take place in one or more of the eligible counties. Either miles of operation or fuel consumption will measure annual usage.

### **Retrofit or Add-On of Emission-Reduction Technology**

This category is for the retrofit of an existing engine on an on-road heavy-duty refuse vehicle, or adding on devices to the refuse vehicle.

To be eligible for funding, the retrofit or add-on systems must be certified or verified to emit at least 25 percent less NOx than the engine prior to the retrofit or add-on. Certification or verification means approved by the EPA, the CARB, or otherwise accepted by the TCEQ.

Retrofits and add-on activities resulting in any alteration from an original configuration of a vehicle or engine must comply with the provisions of EPA Memorandum 1A (Memo 1A), related to ensuring that altered vehicles and engines continue to meet required emission standards. Importantly, aftermarket systems for converting a vehicle and engines to alternative fuel operation must comply with EPA certification requirements under Memo 1A. Copies of Memo 1A are available from the EPA and the TCEQ, and will be made available on the NCTCOG Web site.

NCTCOG will reimburse the incremental cost of the purchase and installation of the retrofit and/or add-on technology, not to exceed an incentive amount that results in a cost-effectiveness of \$5,000.00 or less per ton of NOx reduced. If the engine is to be rebuilt to install the emission-reduction devices, the incremental cost is the difference between the cost of rebuilding the existing engine and the cost of rebuilding the engine to include the retrofit or add-on technology. If the engine does not need to be rebuilt in conjunction with installing the new technology, then the incremental cost will be the full cost of purchasing and installing the technology.

Expenses for in-house labor and travel will not be covered. Costs that may be reimbursed, subject to approval by the TCEQ, include:

- invoice cost of the retrofit kit or add-on devices, including sales tax and delivery charges;
- associated supplies directly related to the installation of the devices;
- installation costs;
- reengineering costs, if the vehicle or equipment must be modified for the retrofit or add-on devices to be installed and used; and
- other costs directly related to the project, subject to approval.

Not less than 75 percent of the annual usage of the vehicle projected for the five years following the retrofit or add-on installation must be projected to take place in one or more of the eligible counties. Either miles of operation or fuel consumption will measure annual usage.

## PROJECT CRITERIA

In addition to the eligibility criteria previously presented, the following list of criteria applies to projects involving on-road heavy-duty refuse vehicle activities.

- One or more eligible activities may be included under one project application.
- On-road heavy-duty vehicle activities must provide a NOx emission reduction compared to baseline NOx emissions. The NOx emissions of vehicles, engines, and retrofit/add-on devices used to achieve the emission reductions must be certified or verified by the EPA, the CARB, or otherwise accepted by the TCEQ. In situations where the model year of the vehicle and the model year of the existing engine are different, such as a vehicle that has already had the engine replaced with a newer engine, the model year of the engine must be used to determine the baseline emission standard for emission-reduction calculations. The application of the 25 percent reduction criteria for each type of activity is explained below.
  - **Purchases and leases.** Purchases and leases are allowed based on what year the purchase or lease is completed. At a minimum, the vehicle and engine being purchased or leased must be certified to emit at least 25 percent less NOx than the current federal NOx emission standard for that vehicle.
  - **Replacements.** The replacement vehicle and engine must have been certified to emit at least 25 percent less NOx than the vehicle being replaced. For example, if you want to replace a 1989 vehicle with a 1999 vehicle, the replacement vehicle and engine must have been certified to emit 25 percent less NOx than the 1989 emission standard.
  - **Repowers.** The replacement engine must be certified to emit at least 25 percent less NOx than the engine being replaced.
  - **Retrofits and add-ons.** Emission standards for retrofit and add-on activities are based on the year of the engine being retrofitted. The retrofit or add-on technology must be certified or verified to emit at least 25 percent less NOx than the standard for the vehicle and engine being retrofitted. For example, if you want to retrofit the engine on your vehicle in 2002, and the engine was originally manufactured in 1996, then the retrofit kit must have been certified or verified to result in NOx emissions that are 25 percent less than the original (1996) certified emission level of the vehicle and engine.
  - **Combined technologies.** In instances where two technologies are combined on the same vehicle and/or engine (for example, repower plus retrofit), NCTCOG may consider the combined reductions from the two technologies in meeting the 25 percent requirements. This decision will be solely at the discretion of the TCEQ and NCTCOG, and will be based on a determination that the combination of the two technologies will result in a permanent reduction in emissions of at least 25 percent.

- The cost-effectiveness of a project, other than a demonstration project, must not exceed \$5,000.00 per ton of NOx emissions reduced in the eligible counties for which the project is proposed. Individual activities included under a single project application may exceed this amount, but the combined project must meet the cost-effectiveness standard.
- An activity is not eligible if it is required by any state or federal law, rule, regulation, memorandum of agreement, or other legally binding document. However, this restriction does not apply to an otherwise qualified activity—regardless of the fact that the state implementation plan assumes that the change in equipment, vehicles, or operations will occur—if, on the date the grant is awarded, the change is not required by any state or federal law, rule, regulation, memorandum of agreement, or other legally binding document. This restriction also does not apply to the purchase of vehicles or equipment that is required only by local law or regulation, or by corporate or controlling board policy of a public or private entity.
- The incremental cost of the proposed activity must be reduced by the value of any existing financial incentive that directly reduces the cost of the proposed activity, including tax credits or deductions, other grants, or any other public financial assistance.
- In the areas of the state where Texas Low Emission Diesel (TxLED) must be provided by suppliers, the baseline and reduced emission rate calculations, for diesel engine usage must be adjusted using a correction factor.

### **Correction Factor for TxLED**

The TCEQ has adopted rules (30 TAC §114.312 to §114.319) requiring that beginning October 2006, diesel fuel sold or supplied for use in compression-ignition engines in certain counties in Texas must meet new low emission diesel (TxLED) standards.

The counties affected by the new TxLED requirements currently include all of the counties eligible for incentive funding in the North Texas Regional Refuse Hauler Program.

The new requirements set a maximum aromatic hydrocarbon content standard of 10 percent by volume per gallon. The requirements also set a minimum cetane number for TxLED of 48.

The TxLED requirements are intended to result in reductions in NOx emissions from diesel engines. Currently, reduction factors of 5.7 percent (0.057) for on-road use have been accepted as an estimate for use of TxLED. However, this reduction estimate is subject to change, based on the standards accepted by the EPA for use in the Texas State Implementation Plan (SIP).

**On-road:**

$$\text{TxLED Correction Factor} = 1 - (0.057)$$

The TxLED correction factor for all on-road projects is 0.943.

- An activity involving a new emission-reduction measure that would otherwise generate marketable credits under state or federal emissions reduction credit averaging, banking, or trading programs is not eligible for funding under this program unless:
  - the activity includes the transfer of the reductions that would otherwise be marketable credits to the state implementation plan or the owner or operator as provided under §386.056, Texas Health and Safety Code; and
  - the reductions are permanently retired.
- For repower activities, eligible rebuilt or remanufactured engines must use original engine manufacturer (OEM) components only and be purchased from the OEM or its authorized dealers and distributors. Engines and components provided by other entities not connected with the OEM may be accepted subject to a case-by-case determination.
- For activities other than leases, the activity life must be for at least five years. Not less than 75 percent of the annual usage of the vehicle projected for the activity life must be projected to take place in one or more of the eligible counties. Leases must be for at least one year, and 75 percent of the annual usage over the lease period must be projected to take place in one or more of the eligible counties.
- For refuse vehicles operating in stop-and-go applications, fuel consumption normally should be used as the annual usage factor. Other operation conditions may warrant miles of operation as the annual usage factor.
- Applicants should refer to the Regional Refuse Hauler Program Technical Supplement to these guidelines for the maximum acceptable activity life established for each type of activity.
- Applicants must agree to monitor the use of the grant-funded vehicles, equipment, infrastructure, and/or fuel, and to report to NCTCOG for the life of each grant-funded activity.
- Applicants must also agree to notify NCTCOG of any changes during the life of the following activities: termination of use; change in use, sale, transfer, or accidental or intentional destruction of grant-funded vehicles or equipment; or change in use of the qualifying fuel.
- NCTCOG may impose additional criteria for certain projects consistent with these guidelines.

## **NOX EMISSION STANDARDS**

The baseline NOx emission standards for this program will be the federal standard for NOx emissions applicable to the type of engine and model year of vehicle. The federal NOx emission standards for on-road heavy-duty engines are listed in the Technical Supplement available from NCTCOG. Potential grant applicants should consult with NCTCOG to ensure that the appropriate baseline standards are used.

## **Calculating NOx Emission Reductions**

In general, the emission-reduction benefit represents the difference in the emission level of a baseline vehicle/engine and a reduced-emission vehicle/engine. In situations where the model year of the vehicle chassis and the model year of the existing engine are different, the model year of the engine must be used to determine the baseline emissions for benefit calculations.

The emission level is calculated by multiplying an emission factor, an activity level, and a conversion factor, if necessary. Because conversion factors and the activity levels may be expressed in different units for the existing and replacement engines, the emission levels for the baseline and reduced-emission vehicles/engines should be calculated separately and then differences taken to determine emission reductions.

### **Calculation of NOx Emission Reductions**

Different types of on-road vehicles operate very differently. For most on-road applications, the annual mileage should establish the activity level. Refuse vehicles operating predominantly in stop-and-go applications accrue low mileage; yet intermittently operate at high load during compaction mode. Therefore, annual fuel use is a more appropriate emission factor to use for these vehicles. Alternatively, an applicant may base the emission reductions on annual mileage for these types of vehicle uses, provided sufficient supporting documentation is submitted as determined by NCTCOG.

If annual fuel consumption is the basis for the emission reductions, an energy consumption factor is used to convert g/bhp-hr to g/gal of fuel used. There are two ways of calculating an engine-specific energy consumption factor:

1. Divide the hp of the engine by the fuel economy in units of gal/hr; or
2. Divide the density of the fuel by the brake-specific fuel consumption of the engine.

While actual fuel receipts or other documentation may support the annual fuel consumption for a baseline engine, the annual fuel consumption of the new vehicle or engine is an estimated proportion to the change in the energy consumption factor.

An online calculator is available online along with a technical supplement which explains in detail the procedures for calculating NOx emission benefits and cost-effectiveness as well as lookup tables for diesel engines. Both are available from NCTCOG at [www.nctcog.org/refuse](http://www.nctcog.org/refuse).

For retrofit and add-on activities, as well as other activities, where the emission reductions are based on a percentage reduction from the baseline, the certified/verified percentage reduction factor can be applied to the applicable emission factor to determine the reduced NOx emission factor.

Alternatively, for activities where the emissions of the new or replacement engine are certified at a specific emissions level (g/bhp-hr), such as purchases or repowers, a conversion factor is needed to determine an appropriate emissions factor in grams per mile. Appropriate conversion factors, to convert g/bhp-hr to g/mile, are included in the Technical Supplement available from NCTCOG.

## **Calculating Cost-Effectiveness**

Only the amount of incentive funds requested under the program can be used in cost-effectiveness calculation for on-road heavy-duty vehicles. The incremental costs for each activity must be reduced by the value of any existing financial incentive that directly reduces the cost of the proposed activity, including tax credits or deductions, other grants, or any other public financial assistance.

To determine the cost-effectiveness of an activity, the incentive amount for the activity included in the project must be amortized over the activity life designated by the applicant, with a discount rate of 3 percent.

For projects that include more than one activity, the total project incentive amount must be used to determine the cost-effectiveness of the project. The applicant may request an incentive amount that is less than the full incremental costs, in order to meet the cost-effectiveness criteria.

The cost-effectiveness must be determined by first adding all of the annualized costs for the activities included in the project. The annual emission reductions of each activity should also be added together to determine an annual emission reduction for the project. The cost-effectiveness of the projects is then determined by dividing the combined annualized costs for all activities included in the project application, by the total annual NOx emission reductions for the combined project activities.

## **GRANT PROCEDURES**

This section contains the general procedures that will be used for application, award, and administration of grants provided under the North Central Texas Regional Refuse Hauler Program.

### **Project Application**

Project grants will be solicited through an open Call For Projects. Copies of the necessary application forms will be made available on the NCTCOG's Refuse Hauler Web site ([www.nctcoog.org/refuse](http://www.nctcoog.org/refuse)) and directly from NCTCOG.

NCTCOG encourages potential applicants, as well as vendors and manufacturers of eligible technologies, to consult with NCTCOG at any time prior to submitting an application, to determine if a project would be eligible and the amount of grant funding that could be awarded for that project. NCTCOG particularly encourages the pre-assessment of classes of technologies and projects as a tool for marketing a technology and a type of project to potential applicants.

### **Project Review and Selection**

Grant applications will be reviewed and evaluated according to criteria established in these guidelines and the Call For Projects. Project selections will be made using ranking and scoring procedures that will be explained in the Call For Projects.

## **Grant Award and Contracting**

Projects selected for funding will be awarded a grant through the development and execution of a grant contract that is signed by the grant recipient and by NCTCOG. Grant contracts may contain additional and more specific requirements than those contained in these guidelines. Grant recipients should review the contract language carefully before accepting and signing the contract.

## **Reimbursement and Reporting**

Grant payments will be provided on a reimbursement basis, meaning that payment will be made after the eligible expense has been incurred by the grant recipient. Grant recipients will also have the option to assign their grant payments directly to the dealer or service provider. NCTCOG will provide the reimbursement request and reporting forms for use by the grant recipient. The grant contract and the reimbursement forms will include requirements for documentation of expenses.

A project status and completion report must also be submitted quarterly, for the period designated by NCTCOG in the grant contract, and upon final completion of all grant-funded purchases. Implementation of all projects awarded funding under the Regional Refuse Hauler Program must be completed by February 28, 2007.

Upon completion of all grant-funded purchases, the grant recipient will need to submit a final request for reimbursement of all remaining un-reimbursed expenses. The final reimbursement request must include a completed and signed release of claims.

## **Project Monitoring and Reporting**

The grant recipient must agree to monitor and track the use of grant-funded vehicles for the activity life designated in the grant contract. The activity life is used to determine the total NOx emission reductions and cost-effectiveness of the activities and the project.

Monitoring reports must be submitted to NCTCOG on an annual or semi-annual basis. These reports will include the usage information over the required reporting period.

## **Return of Grant Payments**

The grant contracts will include provisions for the grant recipient to return a prorated share of the grant payments if the NOx emission reductions originally projected for the project are not achieved.