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December 2014

Texas Emissions Reduction Plan Biennial Report (2013-2014)

A Report to the 84th Texas Legislature

Air Quality Division

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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December 2014

Prepared by:

Air Quality Division
Texas Commission on Environmental Quality

SFR-079/14

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*

Richard A. Hyde, P.E., *Executive Director*

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Summary

Texas Emissions Reduction Plan

This seventh Texas Emissions Reduction Plan (TERP) biennial report is produced by the Texas Commission on Environmental Quality (TCEQ) in fulfillment of the requirements of Texas Health and Safety Code (THSC) 386.057 and 386.116(d).

The TERP was established under THSC Chapter 386 by the 77th Texas Legislature in 2001, through the enactment of Senate Bill (SB) 5. Under THSC 386.052(b) the statutory objectives of the TERP include:

1. achieving maximum reductions in nitrogen oxides (NO_x) to demonstrate compliance with the Texas State Implementation Plan (SIP);
2. preventing areas of the state from being in violation of National Ambient Air Quality Standards (NAAQS) established by the United States Environmental Protection Agency under authority of the Federal Clean Air Act (FCAA);
3. achieving cost-saving and multiple benefits by reducing emissions of other pollutants;
4. achieving reductions of emissions of diesel exhaust from school buses; and
5. advancing technologies that reduce NOx and other emissions from facilities and other stationary sources.

Lowering NO_x emissions from TERP-eligible sources remains an important strategy for the SIP, which details how the state will meet the FCAA requirements.

Recent additions to the TERP also include programs to support increased use of alternative fuel for transportation in Texas.

Revenue and Funding

The TERP is funded from fees and surcharges on obtaining a certificate of vehicle title, purchase or lease of heavy-duty vehicles and equipment, and registration and inspection of commercial vehicles. Revenue into the TERP Fund, including earned interest, over Fiscal Year (FY) 2014 – 2015 biennium is projected to be $359,324,000. Biennial appropriations and statutorily-required transfers and deductions from the TERP Fund are expected to be $159,148,879, including $155,192,327 appropriated to the TCEQ to fund TERP grant programs and administer those programs.

The unexpended balance in the TERP Fund at the end of the FY 2012 – 2013 biennium was $678,465,725. The balance at the end of the FY 2014 – 2015 biennium is projected to reach $878,640,847.

Program Highlights

The TERP includes incentive funding for a variety of programs. The primary TERP grant program continues to provide grants to reduce NO_x emissions from mobile sources in the state's nonattainment areas and areas of concern. Other programs include funding for natural gas vehicles and other alternative fuel vehicles, and infrastructure to provide fuel for those vehicles. The TERP also includes funding to reduce emissions from school buses.

A recently created program provides funding for new technologies to reduce emissions from certain stationary facilities. Funding for air monitoring in the North Texas region was also added to the TERP. In addition, energy efficiency programs established under the TERP continue to help the state strive to reduce energy-use and energy-related emissions in a growing and robust economy.

Some of the key program highlights through FY 2014 are provided below.

- Since 2001, the **Diesel Emissions Reduction Incentive Program** has provided over $905 million to replace or upgrade over 15,600 vehicles and pieces of equipment, resulting in a reduction of 160,836 tons of NO_x in the nonattainment areas and other areas of concern. This program is implemented through several grant programs: Emissions Reduction Incentive Grants Program; Rebate Grants Program; Small Business Grants Program; and Third-Party Grant Program. In addition, the TCEQ received federal funds in 2010 under the American Recovery and Reinvestment Act to award additional grants consistent with the Rebate Grants Program requirements.
- The **Texas Clean Fleet Program, implemented in 2009,** and **Texas Natural Gas Vehicle Grant Program, implemented in 2011,** have together provided over $60 million to replace or upgrade existing vehicles with 802 medium- and heavy-duty vehicles powered by natural gas, 162 vehicles powered by liquefied petroleum gas, and 55 hybrid vehicles. These projects are projected to result in a reduction of 598 tons of NO_X in the areas designated for operation of the vehicles under these programs.
- Through FY 2014, $690,625 has been provided from the new **Light-Duty Motor Vehicle Purchase or Lease Incentive Program, implemented in 2013,** in rebates for the purchase of light-duty alternative fuel vehicles, including 311 plug-in electric vehicles and six vehicles powered by natural gas.
- To ensure the availability of fuel for alternative fuel vehicles, the **Alternative Fueling Facilities Program** and the **Clean Transportation Triangle Program** have provided over $5.6 million to establish or upgrade 22 natural gas fueling stations since 2011.
- Over $25.9 million has been awarded under the **Texas Clean School Bus Program, established in 2005,** including $21.6 million in TERP funds and

$4.3 million in federal funds for the retrofit of 7,103 buses in Texas with systems to control the emissions of diesel particulate matter in and around the buses.

- The **New Technology Implementation Grants Program, established in 2009, has** awarded $3.7 million through FY 2014, for a project to use compressed air to store energy generated by wind power.
- The TERP-funded **Regional Air Monitoring Program** established 21 new air monitoring sites in 2012 and 2013 in the North Texas area using $5.3 million under a contract with the North Texas Commission.

I. Overview

The Texas Emissions Reduction Plan (TERP) was established by Senate Bill (SB) 5, 77th Texas Legislature, Regular Session, in 2001 under Texas Health and Safety Code (THSC) Chapter 386. Subsequent updates and changes have been made to the TERP to ensure effectiveness in meeting program objectives and to address new priorities. Legislative changes made in 2013, including SB 1727, 83rd Texas Legislature, Regular Session, are explained in Appendix 1, *Legislative Update*.

Under THSC 386.052(b) the statutory objectives of the TERP include:

1. achieving maximum reductions in nitrogen oxides (NO_x) to demonstrate compliance with the Texas State Implementation Plan (SIP);
2. preventing areas of the state from being in violation of National Ambient Air Quality Standards established by the United States Environmental Protection Agency under authority if the Federal Clean Air Act (FCAA);
3. achieving cost-saving and multiple benefits by reducing emissions of other pollutants;
4. achieving reductions of emissions of diesel exhaust from school buses; and
5. advancing technologies that reduce NOx and other emissions from facilities and other stationary sources.

Recent additions to the TERP also include programs to support increased use of alternative fuel for transportation in Texas in association with reducing emissions.

Since NO_x is a primary precursor to the formation of ground-level ozone, the TERP targets areas in Texas designated as nonattainment for ground-level ozone under the FCAA, as well as other areas of concern for ozone issues. Lowering NO_X emissions from TERP-eligible sources remains an important component of the SIP, which details how the state will meet FCAA requirements.

The TERP is currently comprised of the following incentive grant programs:

- Diesel Emissions Reduction Incentive (DERI) Program
- Texas Clean Fleet Program (TCFP)
- Texas Natural Gas Vehicle Grant Program (TNGVGP)
- Drayage Truck Incentive Program (DTIP)
- Clean Transportation Triangle (CTT) Grant Program
- Alternative Fueling Facilities (AFFP) Program
- Texas Clean School Bus Program (TCSB)
- Light-Duty Motor Vehicle Purchase or Lease Incentive (LDPLI) Program
- New Technology Implementation Grants (NTIG) Program

Additional TERP programs include:

- Energy Efficiency Programs
  - Goal for Energy Efficiency
  - Energy Efficiency Programs in Institutions of Higher Education and Certain Government Entities
  - Texas Building Energy Performance Standards
- Regional Air Monitoring Program
- Health Effects Study
- Air Quality Research Support Program

The TERP Advisory Board, a 15-member body created under THSC 386.058, assists the TCEQ in administering the TERP. Five members each are appointed by the governor, lieutenant governor, and speaker of the House of Representatives. The Board also includes seven ex officio members. A list of members is included in Appendix 2, *TERP Advisory Board Members*.

Subsequent sections explain the status of the TERP programs.

II. Funding

Texas Emissions Reduction Plan Fund

The TERP is funded from revenue deposited to the TERP Fund established under THSC 386.251 as an account in the State treasury. The revenue going to the TERP Fund comes from the fees and surcharges listed below.

- Tax Code 151.0515(b): A 2% surcharge on the sale price or lease/rental amount of off-road diesel equipment sold, rented, or leased (a surcharge is also applied to the storage, use, or the consumption of this equipment in Texas).
- Tax Code 152.0215(a): A 2.5% surcharge of the total consideration on sale or lease of model year pre–1997 on-road diesel vehicles over 14,000 pounds and a 1% surcharge for vehicle model year 1997 and newer.
- Texas Transportation Code 502.358: A 10% surcharge of the total fees due for the registration of truck-tractors and commercial motor vehicles.
- Texas Transportation Code 501.138(a): A portion of the vehicle certificate of title fee, $20 out of the $33 fee for applicants in the nonattainment counties and affected counties and $15 out of the $28 fee for applicants in all other counties; and

- Texas Transportation Code 548.5055: A $10 fee on commercial motor vehicles required to have an annual safety inspection.

Use of the revenue received into the TERP Fund is authorized through appropriation by the Texas Legislature and other statutorily-directed deductions from the Fund. The annual revenue in the TERP Fund in Fiscal Year (FY) 2014 is estimated to exceed $178 million. The revenue received into, and the appropriation from the TERP Fund, are listed in Appendix 3, *TERP Fund*.

Funds Allocation

The TCEQ was appropriated $77,596,164 in FY 2014 and $77,596,163 in FY 2015 to implement and administer the TERP programs. The allocation of appropriated amounts from the TERP Fund is set forth in THSC 386.252. The allocated amounts for FY 2014 and 2015 are listed in Appendix 4, *TERP Funding Allocation*.

Money is also appropriated by the Texas Legislature directly to the Energy Systems Laboratory of the Texas Engineering Experiment Station, Texas A & M University System, for administrative costs associated with TERP-related responsibilities.

Notwithstanding the allocation formula in THSC 386.352, the legislative appropriations under the State Appropriations Act dictate the specific funding amounts that may be used and how those funds are allocated. In addition, the TCEQ may reallocate some of the funds among the TERP programs, subject to certain limitations.

III. Program Accomplishments

Since the establishment of the TERP in 2001, the plan has been updated and enhanced several times to address legislative priorities and the air quality issues facing the state. Recent changes and additions to the TERP have increased the role of the TERP in encouraging use of alternative fuels for transportation in Texas and to support new and innovative technologies for reduction of emissions from stationary facilities.

Grants to Reduce NO_x Emissions from Vehicles and Equipment

Diesel Emissions Reduction Incentive (DERI) Program

The DERI program is managed by the TCEQ and provides grants to fund projects in the 42 DERI-eligible counties, including counties designated nonattainment (see Appendix 6, *Texas Nonattainment Area Counties*) and other affected counties. A map of the DERI-eligible counties is provided in Appendix 5, *Diesel Emissions Reduction Incentive Program Counties*.

The DERI Program encompasses several associated grant programs. In addition, in 2010 the TCEQ received federal stimulus funds under the American Recovery and Reinvestment Act (ARRA) to fund projects using the DERI Program criteria.

A summary by area of grants awarded under these programs from 2001 through August 31, 2013, is provided in Appendix 7, *DERI Program Projects by Area*. Appendix 8, *DERI Program Projects by Emissions Source*, summarizes these grants by emission source. A complete list of the individual grant awards is available on the TERP website at <www.terpgrants.org>.

Of the grants awarded from 2001 through FY 2013, 9,580 projects under all grant categories for a total of $905,143,138 were either active or completed at the end of FY 2014. These projects are projected to reduce NO_X emissions by 160,836 tons, representing about 54 tons per day in 2014, at an average cost per ton of $5,628. These totals do not include grants awarded and subsequently canceled or for which funds may have otherwise been returned after the award.

DERI grant awards were not made during FY 2014 because of the need to update rules and guidelines as a result of changes made by SB 1727 in 2013. The program rules were amended on April 9, 2014, and revised guidelines were adopted August 20, 2014. The DERI Program is allocated over $68.5 million to award in FY 2014 – 2015. Because no projects were awarded in FY 2014, the full biennial allocation will be awarded in FY 2015.

Per THSC 386.106, grants were previously limited to projects that did not exceed a cost of $15,000 per ton of NO_x emissions reduced. The TCEQ had the authority to set cost-per-ton-limits lower than the maximum amount authorized in the statute. For each grant round, the TCEQ established a maximum cost per ton for eligible activities that was less than the statutorily-authorized maximum. Since FY 2007, the cost per ton limits were set at $5,000 per ton of NO_x reduced for marine and locomotive projects and $10,000 per ton of NO_x reduced for all other projects.

Changes made by SB 1727 removed the $15,000 per ton cap on the cost effectiveness of a project. In future grant rounds, the TCEQ will determine an appropriate cost-effectiveness limit, based on funding levels and expected participation in the program.

The changes under SB 1727 also authorized the TCEQ to consider alternative test data and other information in determining emission factors and to calculate emissions reductions for projects to convert heavy-duty on-road vehicles and non-road equipment to operate under a dual-fuel configuration that uses natural gas and diesel fuel. The TCEQ was also authorized to consider these systems, even though they may not achieve a 25 percent reduction in NO_x emissions, as required for other projects. The criteria and procedures for considering dual-fuel conversion systems were outlined in the revised guidelines and will be implemented with the grant rounds opened in early FY 2015.

The emissions reductions presented are projections based on the emissions reduction calculations for the grant projects. The projections are continually updated to account for newly-awarded projects and changes to existing projects. However, not all projects will be finally implemented and the actual emissions reductions achieved by the projects that are implemented may be lower than the projections. The timing on when the emissions reductions are achieved may also be delayed as grantees begin operating grant-funded equipment later than the dates used to determine the original projections.

On average, grantees reported achieving at least 85 percent of the annual commitments for use of the grant-funded vehicles and equipment for DERI grant projects that were active and subject to reporting during 2013.

The status of each DERI grant program is explained below.

Emissions Reduction Incentive Grants (ERIG) Program

Eligible projects under the ERIG Program may include new purchases, replacements, repowers, retrofit technologies, infrastructure, qualifying fuels, and rail relocation and improvement. Eligible emission sources include heavy-duty on-road vehicles, non-road equipment, marine vessels, locomotives, and certain stationary engines.

Because of the need to revise program rules, the TCEQ was not able to open a new ERIG grant application period in FY 2014. Of the ERIG Program grants awarded through FY 2013, 3,463 ERIG grants for a total of $671,744,968 were either active or completed by the end of FY 2014. The ERIG projects are projected to reduce NO_X emissions by about 131,227 tons, representing about 40 tons per day in 2014, at a cost per ton of $5,118.

A new application period opened September 3, 2014, with an application deadline of December 2, 2014. Of the $68.5 million allocated to the DERI Program for FY 2014 – 2015, the TCEQ anticipates awarding approximately $50 million to ERIG projects under this application period. A list of the grant awards will be available on the TERP website at <www.terpgrants.org>.

Rebate Grants Program

In 2006, the TCEQ initiated a Rebate Grants Program to implement a portion of the TERP as authorized under THSC 386.117. The purpose of this program is to provide a streamlined and simplified process for submission and approval of grant applications and contracting.

Activities eligible for a rebate grant are intended to reduce NO_X emissions in the designated 42 TERP-eligible counties from on-road heavy-duty diesel vehicles and non-road diesel equipment. Rebate grants have been based on pre-approved maximum rebate grant amounts for eligible on-road and non-road replacement and repower projects.

Because of the need to revise program rules, the TCEQ was not able to open a new Rebate Grant application period in FY 2014. Of the rebate grants awarded through FY 2013, 2,335 rebate grants for a total of $151,911,768 were either active or completed by the end of FY 2014. The rebate-grant projects are projected to reduce NO_X emissions by approximately 19,034 tons, representing about 10 tons per day in 2014, at a cost per ton of $7,980.

The TCEQ anticipates opening a new application period in early 2015, once the grant selections are completed for the latest ERIG application period. The TCEQ will allocate remaining FY 2014- 2015 funds, expected to be over $18 million, to this program. A list of the grant awards will be available on the TERP website at <www.terpgrants.org>.

Small Business Grants Program

The Small Business Grants Program targets small businesses and other entities that own and operate no more than two vehicles or pieces of equipment, or a combination of the two, one of which must be diesel-powered and a pre-1994 model year vehicle or non-road equipment with "uncontrolled emissions" as defined in THSC 386.116. The program was first established in FY 2004.

The program is streamlined for small businesses in the 42 TERP-eligible counties to apply for financial assistance to replace or repower vehicles or equipment, via a simplified application process. The TCEQ has incorporated the small business grants into the Rebate Grants Program.

Of the small business rebate grants awarded under the Rebate Grants Program through FY 2013, 777 small business projects were either active or completed by the end of FY 2014. These grants total $52,501,845, and are projected to reduce NO_X emissions by approximately 7,271 tons, representing about 3 tons per day in 2014, at a cost per ton of $7,221.

American Recovery and Reinvestment Act (ARRA) Grants Program

The ARRA Grants Program provided over $12 million in federal stimulus funds for the TCEQ to offer additional financial incentives for a TERP-ARRA rebate program for individuals, corporations, organizations, government or governmental subdivisions or agencies, businesses, and other legal entities. These funds were made available for award through August 31, 2011.

The TCEQ awarded $12,460,077 in ARRA rebate grants. The 233 ARRA rebate grants are projected to reduce NO_X emissions by about 1,311 tons, representing 0.75 tons per day in 2014, at a cost per ton of $9,503.

Third-Party Grant Program

The TCEQ has awarded eight third-party grants to four grantees to assist with the implementation of TERP projects in the TERP-eligible areas: the Railroad Commission of Texas to fund propane and natural gas vehicles and equipment projects; the North Central Texas Council of Governments to fund various TERP projects, including refuse haulers; the Houston-Galveston Area Council to fund local government and commercial TERP projects, including projects to replace vehicles operating at or near the ports; and the Texas General Land Office to fund natural gas vehicle and equipment projects.

Through FY 2014, the TCEQ funded $69,026,324 in third-party grants. The third-party grantees funded 3,795 subgrants that are projected to reduce NO_X emissions by 9,264 tons, representing 3.835 tons per day in 2014, at a cost per ton of $7,450.

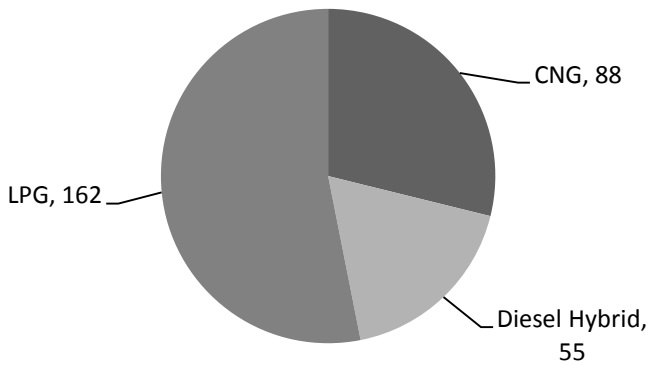
The TCEQ does not anticipate awarding additional third-party grants in FY 2015.

Texas Clean Fleet Program (TCFP)

The TCFP provides grants to owners of at least 75 vehicles in Texas to replace a minimum of 20 diesel vehicles with new alternative-fuel or hybrid vehicles. Under the program, alternative fuels include: compressed natural gas (CNG), liquefied petroleum gas (LPG), hydrogen, methanol (85 percent by volume), and electricity.

Because of the need to revise program rules, the TCEQ did not was not able to complete a TCFP grant application period in FY 2014. Of the TCFP grants awarded through FY 2013, 12 TCFP grants to replace 305 vehicles, for a total of $23,595,115, were either active or completed by the end of FY 2014. These included 88 natural gas vehicles, 162 LPG vehicles and 55 diesel hybrid vehicles. These grants are projected to reduce about 314 tons of NO_x over the five-year life of the projects, for an average cost per ton of NO_x reduced of $75,037.

TCFP Number of Vehicles Funded



The TCFP may be implemented statewide. However, through FY 2013 the TCEQ limited grant-funded vehicles to operate at least 75 percent of annual use in the same counties eligible under the DERI Program.

The latest application period opened in June 2014 and closed in October 2014, with an available funding amount of $7.76 million. A list of the grant awards will be available on the TERP website at <www.terpgrants.org>.

For the latest grant round, the TCEQ revised the eligible counties for the TCFP to be consistent with the counties eligible under the Texas Natural Gas Vehicle Grant Program, which includes the counties designated under the Clean Transportation Triangle. A map of those counties is included in Appendix 9, *Clean Transportation Triangle Counties*.

Also, with changes made by SB 1727, vehicles used for transportation of raw agricultural products may be exempted from the requirement that a grant-funded vehicle operate at least 75 percent of annual use in the eligible counties. However, only the travel in the eligible counties is used to calculate the NO_x emissions reductions of a project. This change was included in the program materials for the latest grant application period.

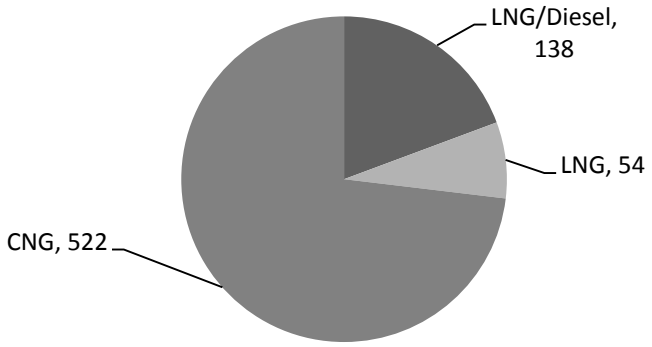
Texas Natural Gas Vehicle Grant Program (TNGVGP)

The TNGVGP provides grants for projects to replace or repower existing heavy-duty and medium-duty vehicles with natural gas vehicles and engines. Grant-funded vehicles must operate at least 75 percent of annual use in one or more of the counties designated under the Clean Transportation Triangle Program. Those counties are shown in Appendix 9, *Clean Transportation Triangle Counties*.

As with the TCFP, changes made by SB 1727 allowed vehicles used for transportation of raw agricultural products to be exempted from the requirement that a grant-funded vehicle operate at least 75 percent of annual use in the eligible counties. However, only the travel in the eligible counties is used to calculate the NO_x emissions reductions of a project.

Because rule changes were not necessary, the TCEQ was able to open a grant application period in January 2014. From the beginning of the program in FY 2012 through FY 2014, the TCEQ awarded 57 TNGVGP grants to replace 714 vehicles, for a total of $36,487,425. The grants included 522 CNG vehicles, 54 LNG vehicles, and 138 vehicles powered by LNG with diesel used for ignition of the fuel. These grants are projected to reduce about 1,137 tons of NO_x over the four-year life of the projects, for an average cost per ton of NO_x reduced of $32,090. These totals included 26 projects awarded grants in FY 2014, to replace 237 vehicles for a total of $10.7 million.

TNGVGP Number of Vehicles Funded



The latest grant application period was scheduled to remain open through May 2015 to award the remaining $14 million from the FY 2014 – 2015 allocation. However, as of August 31, 2014, the TCEQ had received sufficient applications to use the remaining funds, subject to approval of the remaining applications. A list of the grant awards will be available on the TERP website at <www.terpgrants.org>.

Drayage Truck Incentive Program (DTIP)

The new DTIP was established by SB 1727 in 2013 to fund the replacement of drayage trucks operating at seaports and rail yards in the state's nonattainment areas (see

Appendix 5, *Texas Nonattainment Area Counties*). Also, at least 50 percent of the annual mileage of the grant-funded vehicles must occur in the counties eligible under the DERI Program (see Appendix 6, *Diesel Emissions Reduction Incentive Program Counties*)

In many cases, vehicles used for drayage are older, higher-polluting vehicles that are longer used for long-haul operations. The concentration of these vehicles operating at seaports and rail yards warranted the establishment of a separate program specifically for replacement of older drayage trucks with newer, less-polluting models.

The rules for this program were adopted on April 9, 2014, and program guidelines were adopted on August 30, 2014. The first application period was opened on September 22, 2014, with applications processed on a first-come, first-served basis. The application deadline was set at May 29, 2015, or until the available funding of $3.1 million was awarded, whichever occurs first. An updated list of the grant awards will be available on the TERP website at <www.terpgrants.org>.

Grants to Provide Alternative Fuels for Transportation

Clean Transportation Triangle (CTT) Grant Program

The CTT was established in 2012 to provide grants for natural gas fueling stations along interstate highways between the Houston, Dallas, Fort Worth, and San Antonio areas.

In 2013, SB 1727 amended the areas eligible under the CTT to include counties located within the triangular area between the previously designated interstate highways and counties included in the EPA-designated, Texas nonattainment counties and other TERP affected counties. A map of the latest eligible counties is provided in Appendix 9, *Clean Transportation Triangle Counties*.

In FY 2012 - 2013, the TCEQ awarded 18 grants for projects under the CTT program, including 10 CNG facilities, two LNG facilities, and six facilities providing CNG and LNG. These grants totaled $3,900,000.00. In FY 2014, the TCEQ selected 19 additional projects for funding totaling $7,759,616. The FY 2014 grant contracts were expected to be finalized by early FY 2015. Lists of the CTT projects awarded in FY 2012 and FY 2013 and the projects selected for funding in FY 2014 are provided on the TERP website at <www.terpgrants.org>.

Alternative Fueling Facilities (AFFP) Program

The AFFP provides grants in Texas nonattainment area (see Appendix 5, *Texas Nonattainment Area Counties*) for the construction, reconstruction, or acquisition of facilities to store, compress, or dispense alternative fuel. Alternative fuels eligible for funding under this program include biodiesel, hydrogen, methanol (85 percent by volume), natural gas, propane, and/or electricity.

In FY 2012 and FY 2013, the TCEQ awarded four grants for projects under the AFFP, including three CNG facilities and one facility providing CNG and LNG, for a total of

$1,786,602. In FY 2014, the TCEQ selected 21 additional projects for funding totaling $7,654,537. The FY 2014 grant contracts were expected to be finalized by early FY 2015. Lists of the AFFP projects awarded in FY 2012 and FY 2013 and the projects selected for funding in FY 2014 are provided on the TERP website at <www.terpgrants.org>.

Other Grants to Reduce Vehicle Emissions

Texas Clean School Bus Program

The Texas Clean School Bus Program is designed to reduce diesel exhaust emissions inside the cabins of school buses throughout the state. Eligible projects may involve emissions-reducing add-on equipment and other applications such as closed-crankcase filtration systems, diesel particulate filters, and diesel oxidation catalysts.

Over the 2014-2015 biennium, the legislature appropriated $3,103,847 for FY 2014 and $3,103,847 for FY 2015 for the Texas Clean School Bus Program to install retrofit devices to reduce diesel exhaust emissions from school buses throughout the state. The TCEQ has also supplemented state funding with federal funding, including $115,278 in State Clean Diesel funds awarded by the EPA in FY 2014.

Through FY 2014, the TCEQ funded the retrofit of 7,103 school buses, for a total funding amount of $25,946,067, including $21,614,775 in state TERP funds and $4,331,292 in federal funds awarded by the EPA under the State Clean Diesel program. A list of the school districts awarded grant funding is provided on the Clean School Bus Program website at <http://www.tceq.texas.gov/p2/clean-vehicles/school-buses.html>.

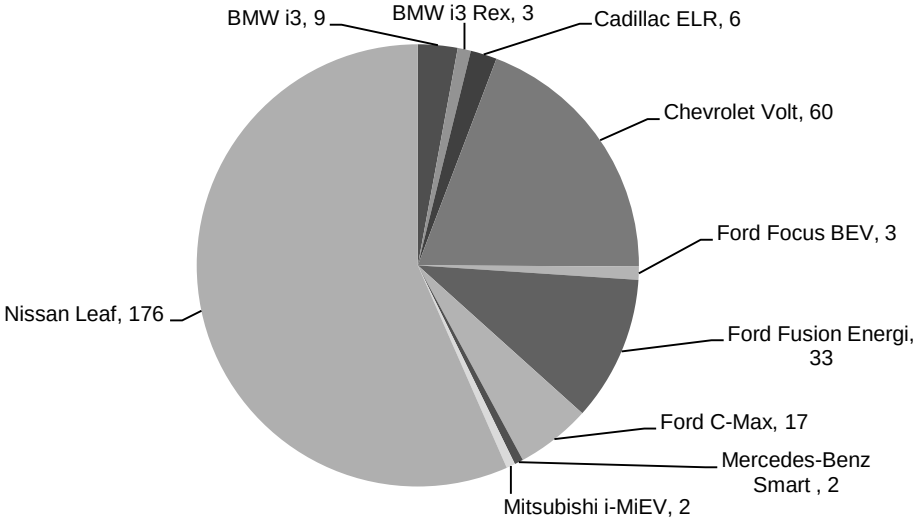
Light-Duty Motor Vehicle Purchase or Lease Incentive Program (LDPLI)

The LDPLI was originally established under SB 5 in 2001 to provide grant funding for the purchase of new light-duty vehicles weighing less than 10,000 pounds that met certain low-emission standards under the EPA light-duty vehicle requirements. The rebates were to be administered by the Texas Comptroller of Public Accounts (CPA) with guidelines established by the TCEQ. However, sufficient revenue was not received for the CPA to begin implementation of the program in FY 2002. Beginning in FY 2003, the legislature did not appropriate funds for this program.

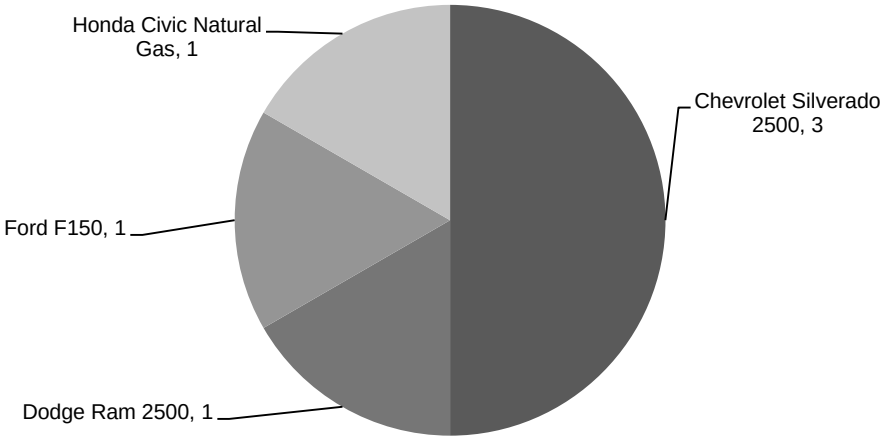
In 2013, SB 1727 revised the program to provide up to $2,500 in grant funding for the purchase or lease of a new light-duty vehicle that operates on natural gas, liquefied petroleum gas, or electricity. Rules for the LDPLI were adopted on April 30, 2014, and the grant application period was opened May 13, 2014.

Through FY 2014, the program provided $690,625 in funding for the purchase or lease of 317 vehicles, including six natural gas and 311 electric vehicles. The charts below show the vehicles funded through August 31, 2014, by fuel type and vehicle model.

LDPLI Electric and Hybrid Vehicles Funded



LDPLI CNG Vehicles Funded



The total FY 2014 -2015 allocation for this program is $3.1 million. The program will continue to accept applications through June 2015 or until available funding is awarded, whichever occurs earlier. The latest list of grant awards is available on the TERP website at <www.terpgrants.org>.

Programs to Encourage Energy Efficiency

Energy Efficiency Programs

Under THSC 386.057, the TCEQ is to include information in this report regarding the effectiveness of certain energy efficiency programs in avoiding and reducing emissions. These programs include:

- Goal for Energy Efficiency, established under the Texas Utilities Code (TUC) 39.905;
- Energy Efficiency Programs in Institutions of Higher Education and Certain Government Entities, established under THSC 388.005; and
- Texas Building Energy Performance Standards, established under THSC 388.003.

Goal for Energy Efficiency

Electric utilities are required to establish and administer energy efficiency programs. Under rules adopted by the Public Utility Commission (PUC), electric utilities are required to acquire energy efficiency savings through the administration of standard offer programs, market transformation programs, pilot programs, and in some cases self-directed programs.

The PUC rules establish a savings goal for electric utilities of 30% of growth in demand and a goal to reduce four-tenths of one percent of summer weather-adjusted peak demand in subsequent years once the utility reaches the 30% goal. The PUC provides information on these programs to the Energy Systems Laboratory (ESL), at the Texas Engineering Experiment Station of the Texas A & M University System, to assess the emissions reductions achieved through these programs.

Energy Efficiency Programs in Institutions of Higher Education and Certain Government Entities

Political subdivisions, institutions of higher education, and state agencies located in nonattainment areas or affected counties, are required to establish a goal to reduce the electric consumption by the entity by at least five percent each state fiscal year for 10 years, beginning October 1, 2011.

These entities are also required to implement energy efficiency measures that meet the standards established for a contract for energy conservation measures under Local Government Code 302.004(b) in order to reduce electricity consumption by the existing facilities of the entity. The entities are required to report to the State Energy Conservation Office (SECO) within the CPA on the implementation of these requirements. SECO provides the information to the ESL to assess the emissions reductions achieved through these programs.

Texas Building Energy Performance Standards

These provisions adopt the energy efficiency chapter of the International Residential Code to achieve energy conservation in single-family residential construction and the International Energy Conservation Code to achieve energy conservation in all other residential, commercial, and industrial construction. Local governments have the responsibility to administer and enforce the standards found in the International Energy Conservation Code and the Energy Efficiency chapter of the International Residential Code. The ESL is responsible for determining the energy savings from energy code adoption and, when applicable, from more stringent or above-code performance ratings.

Effectiveness of Energy-Efficiency Programs

The ESL compiles the information on energy-efficiency programs and assesses the annual electricity savings and annual NO_X emissions reductions that can be attributed to those savings. In addition to the programs explained above, under THSC 386.252(a)(14) the TCEQ contracts with the ESL for the development of annual computation of statewide emissions reductions obtained through wind and renewable energy resources. The ESL has also assessed the electricity savings from residential air conditioner replacements, assuming that air conditioners in existing homes are replaced with more efficient SEER 13 units, versus an average of SEER 11.

The ESL prepares a report of integrated annual electricity savings and total NO_X emissions reductions from these programs entitled *Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP)*. The ESL reports are available from the ESL website at <http://esl.tamu.edu/terp/reports>. A link to the reports is also provided on the TERP website at <www.terpgrants.org>.

The latest ESL report (ESL-TR-13-10-03) was published in November 2013 for the period January 2012 – December 2013. The next update is anticipated to be published by the end of 2014 and will be available on the ESL website.

The tables below provide information from the 2013 ESL report on total annual electricity savings in megawatt hours per year (MWh/year) and the ESL's calculated annual NO_x emissions reductions from these programs in 2012 and the savings and emissions reductions that were projected to be achieved by the end of 2013.

Annual Electricity Savings (2012 and 2013)

Program	2012 (MWh/year)	2013* (MWh/year)
Texas Building Energy Performance Standards	498,883	682,701
Goal for Energy Efficiency	1,831,318	2,205,082
Energy Efficiency Programs in Institutions of Higher Education and Certain Government Entities	714,891	909,903
Green Power Purchases (wind)	13,049,580	13,560,301
Residential Air Conditioner Retrofits	319,244	303,282
Total Integrated Annual Savings	**16,413,917**	**17,661,268**

*The 2013 figures are the ESL's projections for through the end of 2013.

Annual NO_x Emissions Reductions (2012 and 2013)

Program	2012 Tons of NO_x	2013* Tons of NO_x
Texas Building Energy Performance Standards	126	172
Goal for Energy Efficiency	522	629
Energy Efficiency Programs in Institutions of Higher Education and Certain Government Entities	221	277
Green Power Purchases (wind)	3,665	3,809
Residential Air Conditioner Retrofits	75	71
Total Integrated Annual Savings	**4,609**	**4,959**

*The 2013 figures are the ESL's projections for through the end of 2013.

Energy-Efficiency Programs and the Texas SIP

The programs administered by the PUC and SECO under the mandates of the SB 5 (2001) and SB 7 (1999) provide avenues for potentially creditable emission reductions to be claimed in the SIP. Accurate quantification of emissions reductions from energy efficiency and renewable energy (EE/RE) is challenging due to the complex nature of the electrical grid system. It is not possible to determine exactly where on the electrical grid electricity comes from for any certain electrical user. In order to factor in the degree of the complexity of the electrical grid and the uncertainties in the data and methods used, emission reduction estimates are modified using a discounting formula to arrive at the reduction estimates reported in the SIP.

The TCEQ has not specifically claimed creditable NO_X reductions for EE/RE in the SIP since the 2005 Dallas-Fort Worth 5-Percent Increment of Progress SIP Revision. The current guidance provided by the EPA for claiming emission reductions from EE/RE presents additional challenges for taking direct credit for EE/RE measures in areas that have a NO_X cap and trade program. Furthermore, the EPA guidance requires a number of additional commitments for states claiming reductions from EE/RE measures. Given some of the uncertainties associated with ensuring that reductions from EE/RE

measures meet the EPA's criteria to be SIP eligible (emissions reductions must be quantifiable, permanent, enforceable, and surplus) and current guidance, the TCEQ has in more recent SIP revisions included EE/RE measures in the Weight of Evidence portion of the SIP rather than claim direct creditable reductions in the SIP.

Program for Emissions Reductions from Facilities

New Technology Implementation Grants (NTIG) Program

The NTIG was established in 2009 with a primary purpose to offset the incremental cost of emissions reductions of pollutants from facilities and other stationary sources in the State of Texas. Projects that may be funded under the NTIG include: Advanced Clean Energy Projects, as defined in THSC 382.003; New Technology Projects that reduce emissions of regulated pollutants from point sources; and Electricity Storage Projects related to renewable energy. Of the money allocated to the NTIG, the TCEQ is to set aside $1 million annually to fund Electricity Storage Projects.

The initial NTIG grant application round opened in August 2010. The TCEQ reviewed three proposals for electricity storage projects and awarded two projects in FY 2011, a thermal storage system in Floyd County and an energy storage system for compressed air in Gaines County, both for capturing wind energy. However, the thermal storage project did not go forward, leaving the compressed air project the remaining active project from the initial solicitation.

This project by was awarded $3.7 million. The grant recipient estimated that the completed project will allow for a minimum of 500 MWh of energy storage. By August 2014 final reimbursement of this project was completed. The grant recipient will continue to assess the operation of the project and the possibility of broader implementation of this technology.

The latest application period closed June 2014. Four applications were received for a total of $4,133,593, from the available FY 2014 – 2015 allocation of $4,655,770. The proposed projects included two electricity storage projects, one new technology project, and an advanced clean energy project. The grant selections were expected to be completed and contracts awarded by the end of calendar year 2014. The final project list will be available on the TERP website at <www.terpgrants.org>.

Other Programs Included under the TERP

Regional Air Monitoring Program

SB 527, 82nd Texas Legislature, Regular Session, 2012, amended THSC 386.051 (b)(6) and 386.252 to establish a regional air monitoring program in the TCEQ's Regions 3 and 4, which includes the Barnett Shale geological area. The statutory language directs TCEQ to allocate TERP funds for a regional air monitoring program implemented under the commission's oversight, including direction regarding the type, number, location, and operation of, and data validation practices for, monitors funded by the program

through a regional nonprofit entity located in North Texas having representation from counties, municipalities, higher education institutions, and private sector interests across the area. The North Texas Commission (NTC) was found to meet all eligibility requirements and received a contract from the TCEQ on October 21, 2011.

A total of 21 monitoring sites have been funded to include 13 Automated Gas Chromatograph systems that provide near real-time volatile organic compound (VOC) data on an hourly basis and eight VOC canister systems that collect ambient air samples every six days. This program was allocated up to $7 million per fiscal year over FY 2012-2013 to establish monitoring sites and begin monitoring activities. The TERP expenditures for the program from October 2012 through August 31, 2014, were $5,316,129. Unobligated funds from the FY 2012-2013 appropriation were transferred to the DERI program and used for additional grants. The program is currently allocated up to $3 million per fiscal year to continue the contract with the NTC.

Air Quality Research Support Program

The Air Quality Research Support Program is established under THSC, Chapter 387. This program identifies and prioritizes scientific questions important to air quality management in Texas and funds scientific investigations to provide answers to these questions.

This program was originally part of the New Technology Research and Development (NTRD) Program, which was one of the original programs under the TERP. Through FY 2009, the NTRD Program, including the research program, was administered by the Texas Environmental Research Consortium in Houston under contracts with the TCEQ. In 2009, HB 1796, 81st Texas Legislature, Regular Session, transferred the responsibility for administering the NTRD grants back to the TCEQ and authorized the TCEQ to contract with a nonprofit organization or institution of higher education to administer the program to support research related to air quality.

In 2011, SB 527, 82nd Texas Legislature, Regular Session, amended THSC, Chapter 387, to eliminate the NTRD Program, but retained the air quality research component under a revised Chapter 387.

Since the change to the NTRD program in 2009, the TCEQ has contracted with the University of Texas at Austin to administer the research program. Research topics are identified and prioritized by an Independent Technical Advisory Committee (ITAC). Projects to be funded under the research program are selected from lists of ITAC recommended projects by the TCEQ and an Advisory Council.

The TERP allocations to this program are determined each fiscal biennium. The latest annual TERP allocation for FY 2014 – 2015 is $1,000,000 per fiscal year.

Some of the major projects that have been sponsored through this program from FY 2010 through FY 2014 include:

- air quality measurement programs in the Barnett Shale natural gas production region, near Fort Worth, that examined the role of emissions associated with natural gas production on ozone formation;
- air quality measurements in the Houston area that quantified continuing progress in reducing emissions of Highly Reactive Volatile Organic Compounds;
- full-scale measurements of industrial flares that have let to operator training to reduce flaring emissions; and
- improvements to the air quality models used to evaluate air quality regulations.

Health Effects Study

The NTRD Program also included a health effects study component that was conducted by the Texas Environmental Research Consortium when it was responsible for administering the NTRD Program. Since the elimination of the NTRD Program, $200,000 per fiscal year has been allocated from the TERP Fund for use by the TCEQ in conducting studies on health effects related to air quality and exposure to certain compounds and pollutants. Recent studies and activities conducted in FY 2013 and 2014 are outlined below. The TCEQ will continue funding additional health effects studies with the allocation from the TERP Fund, as well as through other non-TERP funding sources.

- Research was conducted by the University of North Carolina that investigates whether formaldehyde exposure via inhalation causes leukemia and lymphohematopoietic cancers. Three peer-reviewed journal articles resulted from this work.
- An international workshop on chemical risk assessment methodologies organized by Toxicology Excellence for Risk Assessment was held at TCEQ offices.
- An external peer review workshop was conducted on the carcinogenic and non-carcinogenic effects of arsenic and inorganic arsenic compounds. This work resulted in a peer-reviewed journal article.
- Studies were conducted by Gradient Corporation on the association between ozone and asthma. The studies began in FY 2014 and will conclude in FY 2015.
- A study was conducted by Gradient Corporation on the association between fine particulate matter of 2.5 microns or less in diameter ($PM_{2.5}$) from forest fires and daily mortality. The results of this study have been submitted to a peer-reviewed journal for publication.
- Work by Gradient Corporation was published in a peer-reviewed journal: “Next Generation Risk Assessment: Incorporation of Recent Advances in Molecular, Computational, and Systems Biology.”

- The TCEQ has also contracted with Gradient Corporation to conduct other studies addressing the NAAQS criteria pollutants, particularly ozone, using non-TERP funding. These have included systematic reviews of associations between ozone and mortality and cardiovascular effects, as well as developing a tool based on ozone clinical studies to help policy makers when setting the NAAQS.

IV. TCEQ Monitoring of TERP Grants

To minimize the risk of fraud, a three-tiered Quality Assurance and Fraud Prevention and Detection Program was developed for the TERP incentive grant programs.

The three levels are listed and described below.

1. The Application Phase requires TCEQ to maintain a uniform process when reviewing applications; review and verify technologies; confirm emission reductions and cost-effectiveness calculations; maintain an electronic database; and perform duplicate reviews.
2. The Contract Phase requires TCEQ to consistently utilize template documents and obtain approval from TCEQ legal and central contracting offices for each contract; follow written grant management procedures; review reimbursement requests completed by fiscal and program staff prior to program management; maintain an electronic database for contract and fiscal information; perform on-site monitoring visits; and ensure an independent contractor physically verifies grantees' expenditures by performing on-site reviews of records and confirming the location and use of equipment.
3. The Tracking and Reporting Phase requires the TCEQ to ensure grantees track usage and report this usage information to the TCEQ every six months for the life of the project; utilize internal and external auditors to perform desk and on-site reviews of activities; and maintain contract provisions for return of funds if the usage does not meet contract commitments or is not tracked and reported. This phase, along with on-site audits by the TCEQ, verifies the project's actual NO_X emission reductions and usage of the funded vehicle/equipment in the affected areas during the activity life.

Under all phases of grant administration, the TERP staff works with TCEQ legal and investigative staff to follow-up on noncompliance issues or issues of potential fraud or abuse.

V. Future Considerations for the TERP Programs

The TCEQ will continue to focus on achieving reductions in NO_X emissions and emissions of other pollutants to help nonattainment areas meet federal air quality standards and to help other areas address air quality concerns.

Implementation of Changes

Over the remainder of the 2014-2015 biennium, the TCEQ will focus on fully implementing changes to existing programs and the new programs established in 2013. Statutory changes made in 2013 are explained in Appendix 1, *Legislative Update*.

A few of the key implementation efforts and considerations for the second half of the biennium are explained below.

Changes to Cost-Effectiveness under the DERI Program

The statutory limits on the maximum cost-effectiveness of a project under the Diesel Emissions Reduction Incentive Program were removed by the Texas Legislature in 2013, leaving the TCEQ with authority to set limits as needed to address program goals and objectives. For the grant application period in FY 2015, the TCEQ has established a limit of $10,000 per ton of NO_x reduced for locomotive and marine projects, increased from a limit of $5,000 per ton used in the recent grant periods, and $15,000 per ton for other project categories, increased from a limit of $10,000 per ton used for the last several years. This change will broaden the number of potential projects and encourage continued participation in the program moving forward.

The TCEQ will assess the effectiveness of these new cost-effectiveness limits and make adjustments as appropriate in future grant rounds to ensure participation in the program while achieving the greatest level of emissions reductions for the least cost.

Dual-Fuel Conversion Systems under the DERI Program

The TCEQ has also implemented the new statutory provisions for evaluating retrofit projects to convert heavy-duty on-road and non-road engines to operate on a combination of diesel fuel and natural gas. Under the statutory changes, the TCEQ may consider alternative requirements for the percentage reduction in NO_x achieved by dual-fuel conversion systems than the standard requirement that a project achieve at least a 25% reduction in NO_x emissions.

For the FY 2015 grant application period, the TCEQ set an alternative requirement for a retrofit project to install a dual-fuel conversion system of at least 10% reduction in NO_x emissions. Per the statutory changes, the TCEQ is also accepting submission of test data from manufacturers of these systems to determine NO_x emissions reductions that will be accepted for a retrofit project to install one of these systems. The TCEQ expects these changes to expand the use of natural gas in on-road and non-road applications while achieving reductions in NO_x.

Emissions Reductions at Seaports and Rail Yards

The TCEQ opened the first Drayage Truck Incentive Program grant application period in October 2014. An initial priority for funding was the replacement of old heavy-duty on-road trucks that were being used primarily to move containers and cargo within and near

a port or rail yard with a new yard truck designed specifically for those types of activities. Applications for other types of drayage trucks were also accepted, and would be considered if funds remained after considering these priority projects.

The TCEQ will assess the success of the initial implementation of this new program and make adjustments as needed to focus efforts on those drayage trucks associated with the greatest level of emissions at seaports and rail yards.

Alignment of Alternative Fuel Vehicle Incentive Programs

With the expansion of the eligible areas under the Clean Transportation Triangle Program, the eligible counties under the Texas Natural Gas Vehicle Grant Program also expanded. In order to better align the Texas Clean Fleet Program with the TNGVGP, the TCEQ also expanded the area covered by the TCFP to include these same areas.

The TCEQ will continue to consider how to make these two programs complimentary in efforts to reduce emissions while increasing the use of alternative fuels.

Alignment of Incentives to Provide Alternative Fuel

With the latest grant application period in 2014, the TCEQ took steps to better align the implementation of the Alternative Fueling Facilities Program and the CTT Program. A joint application period was held to allow applicants to apply for a grant from either program under one combined application process. Applications were evaluated under separate but similar criteria for both programs.

The TCEQ will continue to evaluate ways to better align the implementation of these two programs, while ensuring that the goals of each program are met.

Legislative Issues

The TCEQ continues to be available to provide analysis, data, research, and information that may be needed to assist the legislature in evaluating opportunities for strengthening the TERP program.

Appendix 1. Legislative Update

In 2013, the 83rd Texas Legislature, Regular Session, enacted SB 1727 amending the criteria and requirements for most of the TERP programs and adding new programs as outlined below.

Diesel Emissions Reduction Incentive (DERI) Program

The bill removed the maximum limits on the cost-effectiveness of a project under the DERI Program. The bill also authorized the TCEQ to establish an alternative percentage emissions reduction requirement for projects involving the conversion of heavy-duty on-road and non-road diesel engines to operate on a combination of diesel and natural gas than required for other projects. In addition, the TCEQ was authorized to consider certified engine test data in determining the emissions reductions from a dual-fuel conversion project if the regular emissions certification requirements for the conversion system prevent fully accounting for the emissions reductions.

Texas Clean Fleet Program (TCFP)

Changes were made to the TCFP to simplify the requirements on the percentage of costs that may be covered by a grant and to authorize the TCEQ to allow trucks replaced under the TCFP that are used to transport raw agricultural products to operate a lesser percentage of annual mileage in designated counties. For most projects, the vehicle must be operated in the eligible counties for at least 25% of annual mileage. For vehicles used to transport raw agricultural products, the TCEQ has required that the vehicles operate at least 10% of annual mileage in the eligible counties. For all projects, only the operation in the eligible counties is considered in determining the NO_X emissions reductions attributable to the project.

Texas Natural Gas Vehicle Grant Program (TNGVGP)

The bill expanded the areas eligible for operation under the TNGVGP as a result of changes to the areas eligible under the Clean Transportation Triangle Program (see discussion below regarding the changes to the CTT Program). The changes also authorize the TCEQ to allow trucks replaced under the TNGVGP that are used to transport raw agricultural products to operate a lesser percentage of annual mileage in designated counties. For vehicles used to transport raw agricultural products, the TCEQ has required that the vehicles operate at least 10% of annual mileage in the eligible counties. For all projects, only the operation in the eligible counties is considered in determining the NO_X emissions reductions attributable to the project.

Clean Transportation Triangle (CTT) Program

The bill expanded the eligible areas under the CTT Program. The original areas included the state's air quality nonattainment areas and counties along the interstate highways connecting the cities of Houston, Dallas, Fort Worth, and San Antonio. The expanded

areas include other counties designated as Affected Counties under the TERP and the counties located within the triangular area formed by the previously-designated interstate highways. Also, the maximum grant amount under the CTT Program was increased to $600,000.

Alternative Fueling Facilities Program (AFFP)

The bill also increased the maximum grant amount under the AFFP to $600,000.

Light-Duty Motor Vehicle Purchase or Lease Incentive Program (LDPLI)

The LDPLI was originally established in 2001 to provide rebates for the purchase or lease of a light-duty vehicle that met certain low-emission standards. However, funding for this program was not fully established and the program was not implemented prior to FY 2014. SB 1727 transferred implementation of the program from the Texas Comptroller of Public Accounts to the TCEQ and changed the program criteria to provide grants of up to $2,500 for the purchase or lease of light-duty vehicles powered by compressed natural gas, liquefied petroleum gas, or electricity (including plug-in hybrid-electric vehicles).

Drayage Truck Incentive Program (DTIP)

The bill created the new DTIP to provide grants for replacement of drayage trucks operating at seaports and rail yards located in the areas of the state designated as nonattainment for air quality under the Federal Clean Air Act.

SB 1727 also amended the funding allocation percentages under THSC 386.252 to account for the program changes.

In addition, HB 2446 amended the definition of an "advanced clean energy project," thereby expanding the projects that may be eligible under the TERP New Technology Implementation Grants Program.

Appendix 2. TERP Advisory Board Members

Appointed by the Governor

Dr. David T. Allen, Ph.D.
The University of Texas at Austin
Representing a Nonprofit Organization or Institution of Higher Education

Mr. Russell Tharp
Goodman Manufacturing Co.
Representing the Air Conditioning Manufacturing Industry

Ms. L. Elizabeth Gunter
American Electric Power
Representing the Electric Utility Industry

Mr. Danny R. Perkins
Representing Regional Transportation

Mr. Mark L. Rhea
Lisa Motor Lines
Representing the Trucking Industry

Appointed by the Speaker, Texas House of Representatives

Mr. Art Daniel
AR Daniel Construction Services, Inc.
Representing the Construction Industry

Ms. Kathleen Hartnett White
Representing Consumer Groups

"Vacant"
Representing the Fuel Industry

Mr. Jerry Harris
King-Mesa Gin
Representing the Agriculture Industry

Mr. Steve Late
BMW of Austin
Representing the Automobile Industry

Appointed by the Lieutenant Governor of Texas

Mr. Michael Flores
McKinstry, Inc.
Representing the Energy-Efficient Construction Industry

Mr. Thomas "Smitty" Smith
Public Citizen
Representing the Environmental Community

Mr. Jim Crites
Dallas/Fort Worth International Airport Board
Representing the Air Transportation Industry

Mr. John Mikolaitis
Cummins Southern Plains, LLC
Representing the Engine Manufacturing Industry

"Vacant"
Representing the Fuel Cell Industry

Ex Officio Membership

The Honorable Troy Fraser
Chair, Senate Natural Resources Committee

The Honorable Patricia Harless
Chair, House Environmental Regulation Committee

Mr. Joe Walton
Texas Commission on Environmental Quality

Mr. Daryl Morgan
Texas General Land Office

Mr. Dan Kelly
Railroad Commission of Texas

Mr. Dub Taylor
State Energy Conservation Office Texas Comptroller of Public Accounts

Mr. John Walser
United States Environmental Protection Agency, Region 6

Appendix 3. TERP Fund

	FY 2013	Exp FY 2014[1]	Exp FY 2015[2]
Beginning Balance (Unencumbered)	**$600,585,833**	**$678,465,725**	**$839,360,391**
REVENUE			
3004 Heavy-Duty Motor Vehicle Sales, Lease, & Use	$15,018,847	$15,169,000	$15,321,000
3012 Motor Vehicle Certificate of Title	$21,980,979	$19,783,000	$19,783,000
3012 Motor Vehicle Certificate of Title – Mobility Fund Transfer[3]	$89,367,691	$79,130,000	$79,130,000
3014 Commercial Motor Vehicle Registration	$12,561,235	$12,089,000	$12,477,000
3020 Commercial Motor Vehicle Inspection	$6,484,960	$6,350,000	$6,413,000
3102 Diesel Equipment Sales, Lease, & Use	$55,188,235	$46,266,000	$47,413,000
3851 Interest on State Deposits	$2,614,010	$0	$0
Subtotal: Actual/Estimated Revenue	**$203,215,957**	**$178,787,000**	**$180,537,000**
Total Available	**$803,801,790**	**$857,252,725**	**$1,019,897,391**
DEDUCTIONS			
Regular Appropriation to the TCEQ	($57,165,047)	($77,596,164)	($77,596,163)
Statewide Cost Allocation Plan	($307,481)	($459,114)	($378,127)
Transfer - Employee Benefits	($161,596)	($545,114)	($452,258)
Lapsed Appropriation	$406,130	$0	$0
Unexpended Balance Authority[4]	($59,157,032)	$61,696,996	($61,696,996)
Transfer to Clean Air Account (Fund 151)	($500,000)	($500,000)	($500,000)
Appropriation to the Energy Systems Laboratory, Texas A&M Engineering Experiment Station	($452,209)	($452,258)	($452,258)
Data Center Reductions	$1,171	($36,680)	($50,000)
Contingency Appropriation [5]	($8,000,000)	$0	$0
TOTAL DEDUCTIONS	**($125,336,065)**	**($17,892,334)**	**($141,256,545)**
Ending Fund / Account Balance	**$678,465,725**	**$839,360,391**	**$878,640,847**

[1]Amounts listed for FY 2014 are still subject to change as the fiscal year finances are reconciled.
[2]Amounts listed for FY 2015 are estimated.
[3]A portion of the fee on obtaining a certificate of title is first deposited to the Texas Mobility Fund and an equivalent amount is transferred from the State Highway Fund to the TERP Fund.
[4]The TCEQ may carry-forward appropriated amounts from the first fiscal year to the second fiscal year of the fiscal biennium.
[5]In FY 2012 and 2013, the TCEQ was appropriated an additional $8,000,000 per year, contingent upon revenues exceeding estimates.

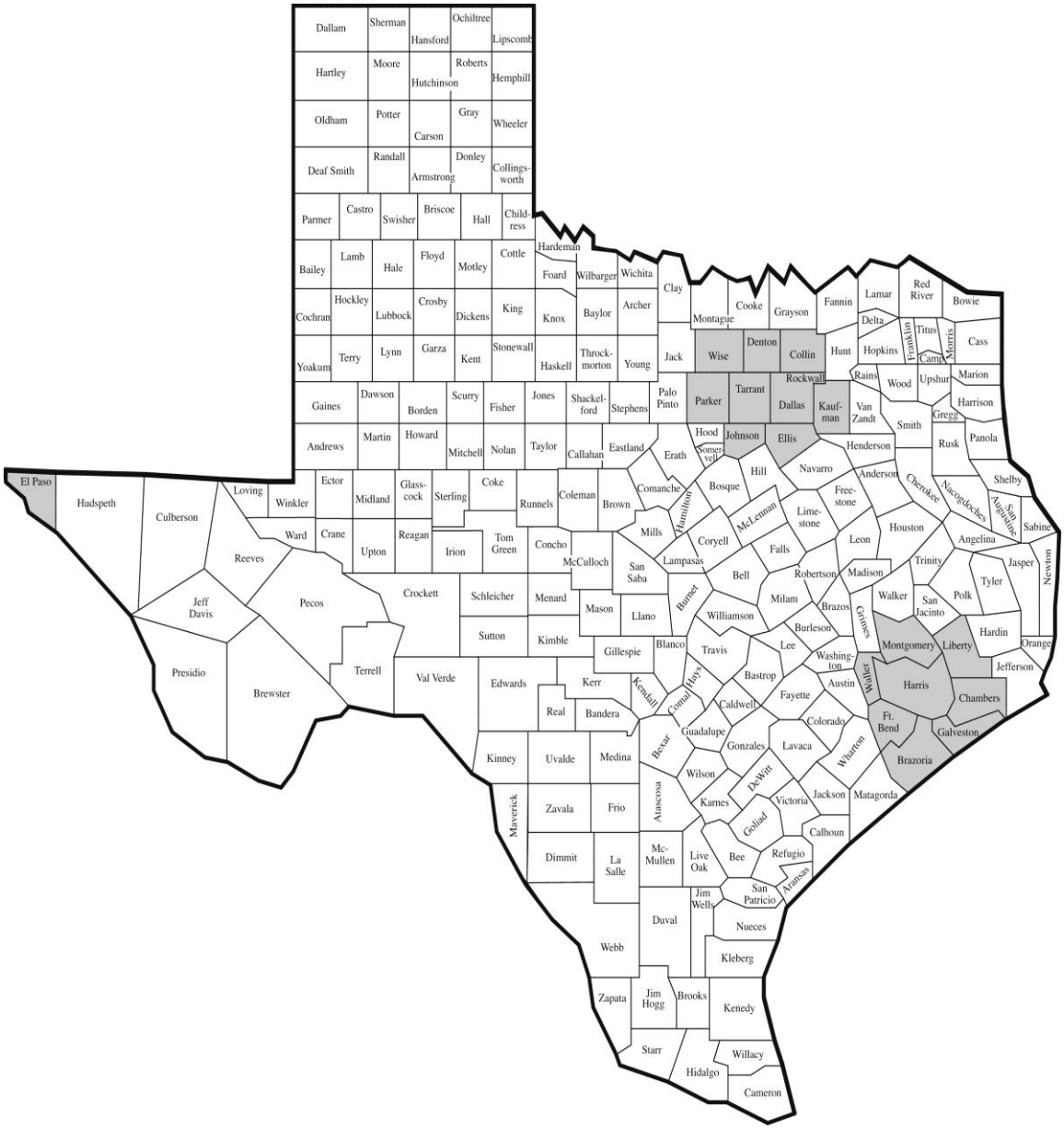
Appendix 4. TERP Funding Allocation

Program	FY 2014/2015 Annual Allocation	Statutory Allocation Percentage (%)[1]
TCEQ Administration	$4,000,000	greater of 4% or $4,000,000
Texas Clean School Bus Program	$3,103,847	not more than 4%
New Technology Implementation Grants (max)	$2,327,885	not more than 3% *$1,000,000 to go to battery storage*
Texas Clean Fleet Program	$3,879,808	5%
Regional Air Monitoring Program	$3,000,000	not more than $3,000,000
Texas Natural Gas Vehicle Grant Program	$12,415,386	not less than 16%
Clean Transportation Triangle Program (max)	$3,879,808	not more than 5%
Alternative Fueling Facilities Program	$3,879,808	not more than 5%
Health Effects Study (max)	$200,000	not more than $200,000
Research	$1,000,000	a specified amount
Energy Systems Laboratory Contract	$216,000	not more than $216,000
Light-Duty Motor Vehicle Purchase or Lease Incentive Program	$3,879,808	not more than 5%
Drayage Truck Incentive Program	$1,551,923	at least 2% and up to 5%
Diesel Emission Reduction Incentive Programs	$34,261,891 (FY 14) $34,261,890 (FY 15)	balance of the TCEQ appropriation
TCEQ TERP Appropriation	**$77,596,164 (FY 14)** **$77,596,163 (FY 15)**	

[1]THSC 386.252 outlines the percentages for allocating the amounts appropriated to the TCEQ from the TERP Fund.

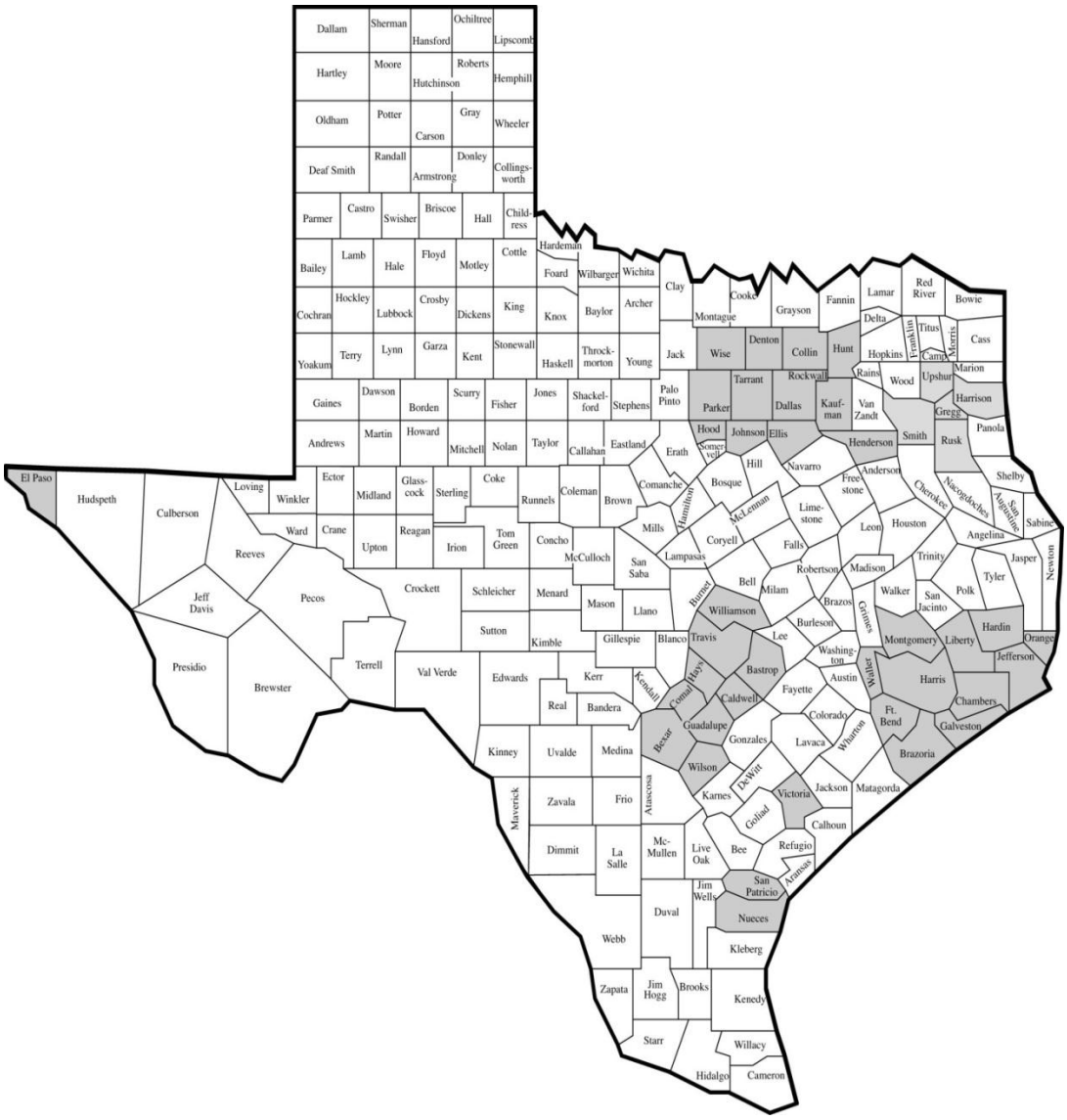
Appendix 5. Texas Nonattainment Area Counties

Area	Counties
Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area	Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise
Houston-Galveston-Brazoria Eight-Hour Ground-Level Ozone Nonattainment Area	Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller
City of El Paso Particulate Matter (PM_{10}) Nonattainment Area	El Paso County (for purposes of TERP eligibility, the TCEQ includes the entire county)



Appendix 6. Diesel Emissions Reduction Incentive Program Counties

Bastrop	Bexar	Brazoria	Caldwell	Chambers
Collin	Comal	Dallas	Denton	Ellis
El Paso	Fort Bend	Galveston	Gregg	Guadalupe
Hardin	Harris	Harrison	Hays	Henderson
Hood	Hunt	Jefferson	Johnson	Kaufman
Liberty	Montgomery	Nueces	Orange	Parker
Rockwall	Rusk	San Patricio	Smith	Tarrant
Travis	Upshur	Victoria	Waller	Williamson
Wilson	Wise			



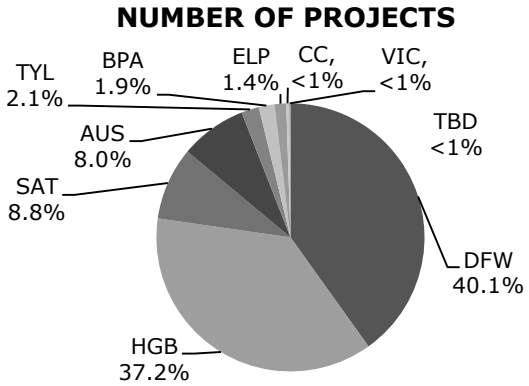
Appendix 7. DERI Program Projects by Area

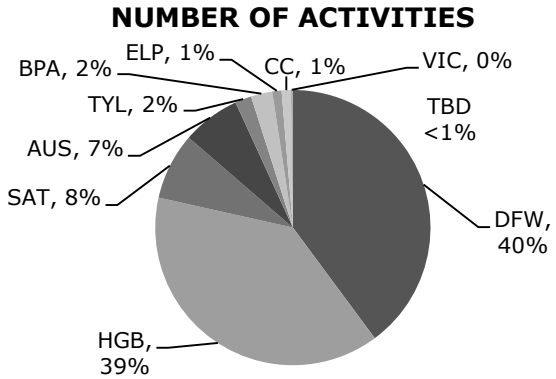
Texas Emissions Reduction Plan (TERP)
Diesel Emissions Reduction Incentive (DERI) Program
Projects by Area
(Does not include projects funded and subsequently canceled.)
2001 through August 31, 2014

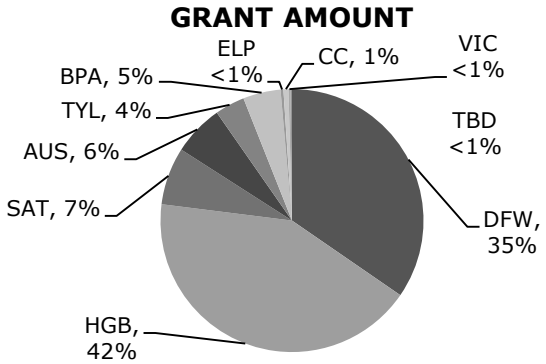
Area	Number of Projects	Number of Activities	Grant Amount	Total NO_x Reduced (tons)	Cost Per Ton	Tons Per Day of NO_x Reduced 2014	Tons Per Day of NO_x Reduced 2015	Tons Per Day of NO_x Reduced 2016	Tons Per Day of NO_x Reduced 2017
Dallas/Fort Worth (DFW)	3,843	6,226	$313,175,663	57,052	$5,489	19.0856	18.3152	14.0616	10.4358
Houston/Galveston/Brazoria (HGB)	3,559	6,039	$383,672,768	71,211	$5,388	23.3956	20.5548	15.7429	11.9523
San Antonio (SAT)	842	1,224	$64,074,653	9,131	$7,017	3.6435	3.6968	2.8766	1.9520
Austin (AUS)	768	1,066	$56,537,201	7,448	$7,591	2.8663	2.7656	2.3353	1.6024
Tyler/Longview (TYL)	204	300	$33,214,984	5,381	$6,172	2.3898	1.8485	1.3616	0.7470
Beaumont/Port Arthur (BPA)	181	393	$41,850,438	8,338	$5,019	2.1857	1.7965	1.4771	1.0341
El Paso (ELP)	135	170	$3,174,307	706	$4,497	0.1943	0.0000	0.0000	0.0000
Corpus Christi (CC)	31	169	$5,562,774	987	$5,634	0.0787	0.0569	0.0569	0.0569
Victoria (VIC)	16	35	$2,202,300	314	$7,019	0.0086	0.1270	0.1270	0.1270
Unassigned (TBD)[1]	1	1	$1,678,050	268	$6,267	0.0000	0.1530	0.1530	0.1530
Totals in TERP Areas	**9,580**	**15,623**	**$905,143,138**	**160,836**	**$5,628**	**53.8482**	**49.3143**	**38.1920**	**28.0605**

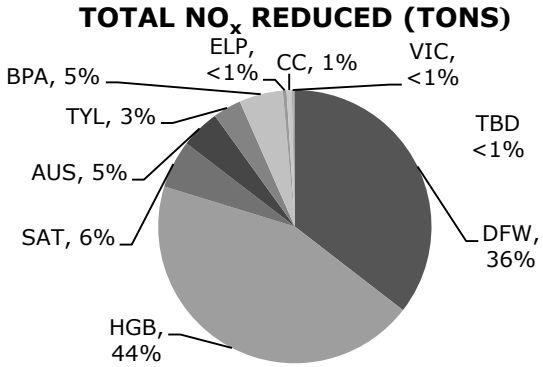
[1]Unassigned amounts represent funding to one or more third-party grant recipients that had not yet been awarded to subgrant recipients and, therefore, the areas of use were not yet determined.

Texas Emissions Reduction Plan (TERP)
Diesel Emissions Reduction Incentive (DERI) Program
Percentages by Area
2001 through August 31, 2014









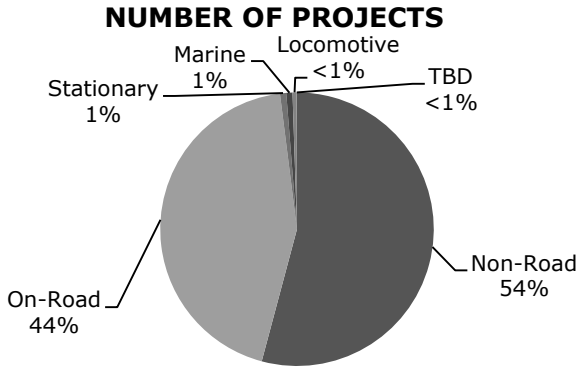
Appendix 8. DERI Program Projects by Emissions Source

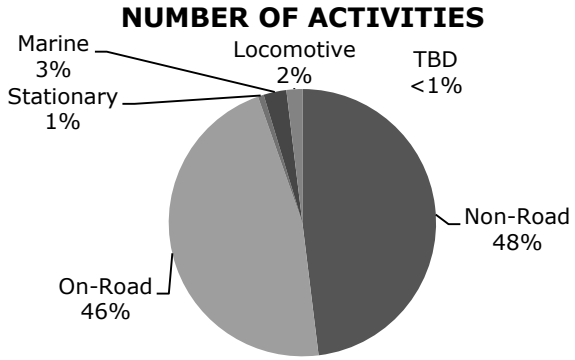
Texas Emissions Reduction Plan (TERP)
Diesel Emissions Reduction Incentive (DERI) Program
Projects Funded To Date, by Emissions Source
(Does not include projects funded and subsequently canceled.)
2001 through August 31, 2014

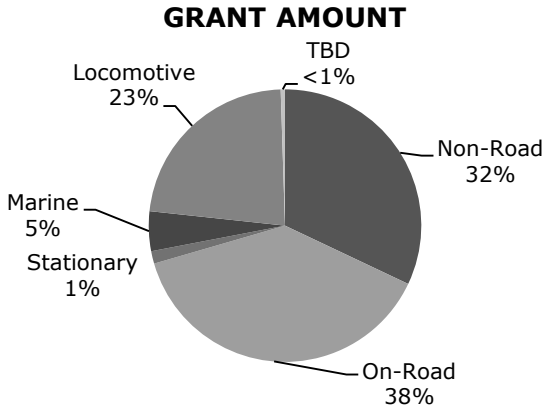
Emission Source	Number of Projects	Number of Activities	Grant Amount	Total NO_x Reduced (Tons)	Cost Per Ton	Tons Per Day of NO_x Reduced 2014	Tons Per Day of NO_x Reduced 2015	Tons Per Day of NO_x Reduced 2016	Tons Per Day of NO_x Reduced 2017
Non-Road	5,188	7,509	$289,981,153	39,884	$7,271	16.4565	14.9333	11.3106	7.4387
On-Road	4,201	7,271	$348,178,180	52,346	$6,651	20.5523	17.2997	13.6998	9.2798
Stationary	71	111	$13,427,343	4,258	$3,154	1.6379	1.6259	0.8638	0.1811
Marine	70	432	$42,635,086	13,542	$3,148	3.8095	3.7195	2.5553	1.7044
Locomotive	48	298	$206,321,342	50,146	$4,114	11.3920	11.3588	9.3854	9.0794
Unassigned (TBD)[1]	2	2	$4,600,035	6609	$6,970	0.0000	0.3771	0.3771	0.3771
Total	**9,580**	**15,623**	**$905,143,138**	**160,836**	**$5,628**	**53.8482**	**49.3143**	**38.1920**	**28.0605**

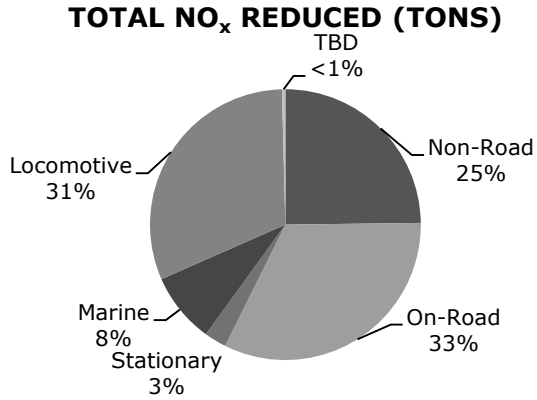
[1]Unassigned amounts represent funding to one or more third-party grant recipients that had not yet been awarded to subgrant recipients and, therefore, the areas of use were not yet determined.

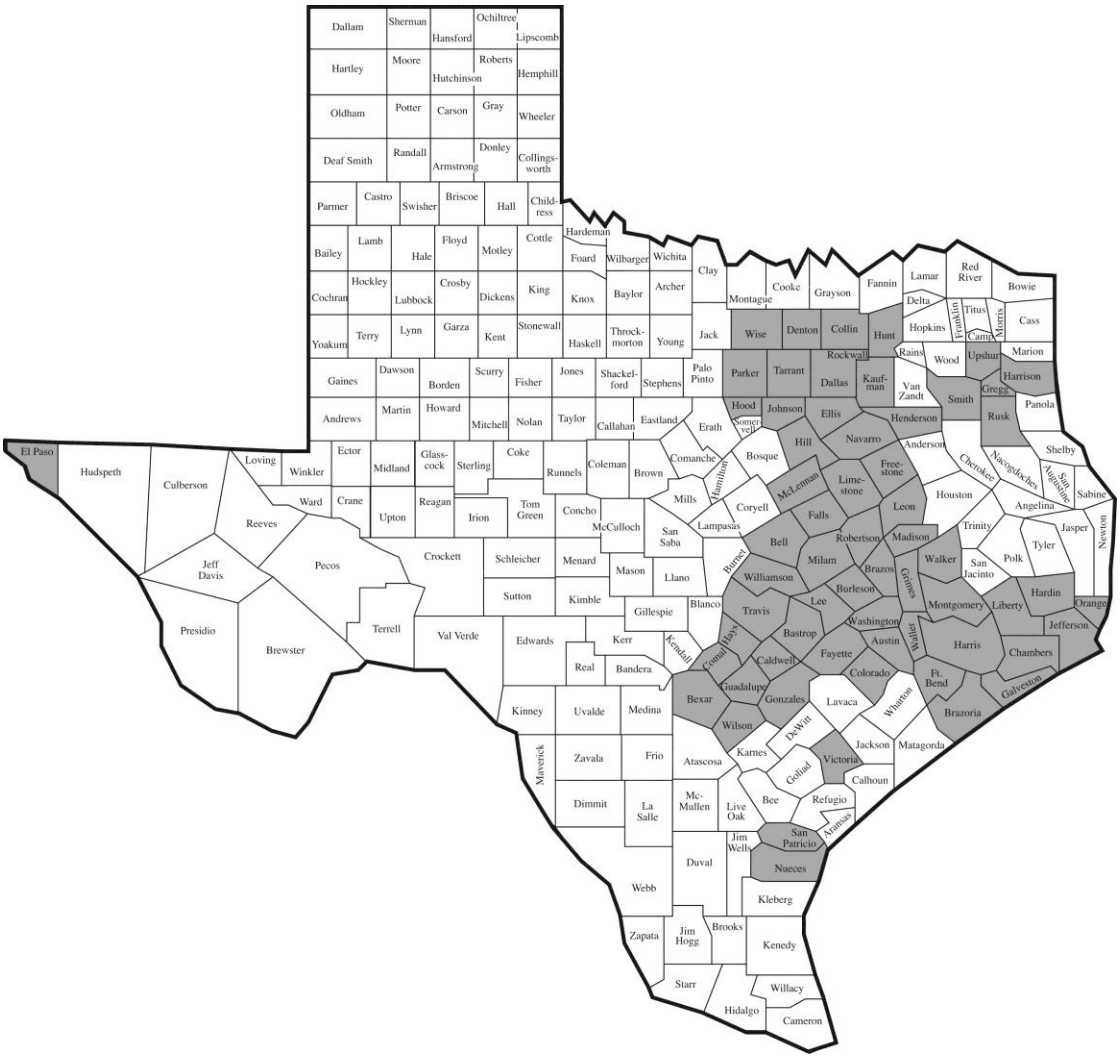
Texas Emissions Reduction Plan (TERP)
Diesel Emissions Reduction Incentive (DERI) Program
Percentages by Emissions Source
2001 through August 31, 2014









Appendix 9. Clean Transportation Triangle Counties

Austin	Bastrop	Bell	Bexar	Brazoria	Brazos	Burleson
Caldwell	Chambers	Collin	Colorado	Comal	Dallas	Denton
El Paso	Ellis	Falls	Fayette	Fort Bend	Freestone	Galveston
Gonzales	Gregg	Guadalupe	Hardin	Harris	Harrison	Hays
Henderson	Hill	Hood	Hunt	Jefferson	Johnson	Kaufman
Lee	Leon	Liberty	Limestone	Madison	McLennan	Milam
Montgomery	Navarro	Nueces	Orange	Parker	Robertson	Rockwall
Rusk	San Patricio	Smith	Tarrant	Travis	Upshur	Victoria
Walker	Waller	Washington	Williamson	Wilson	Wise