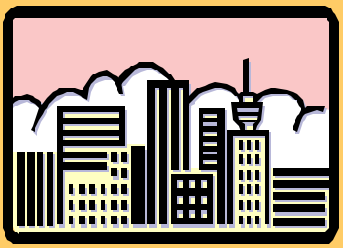
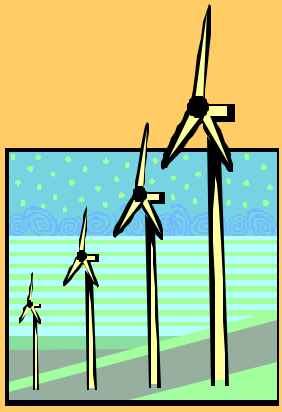
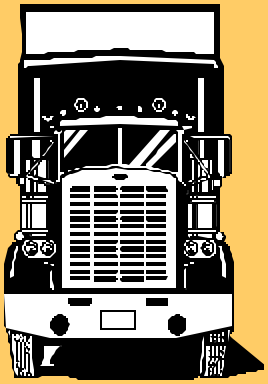
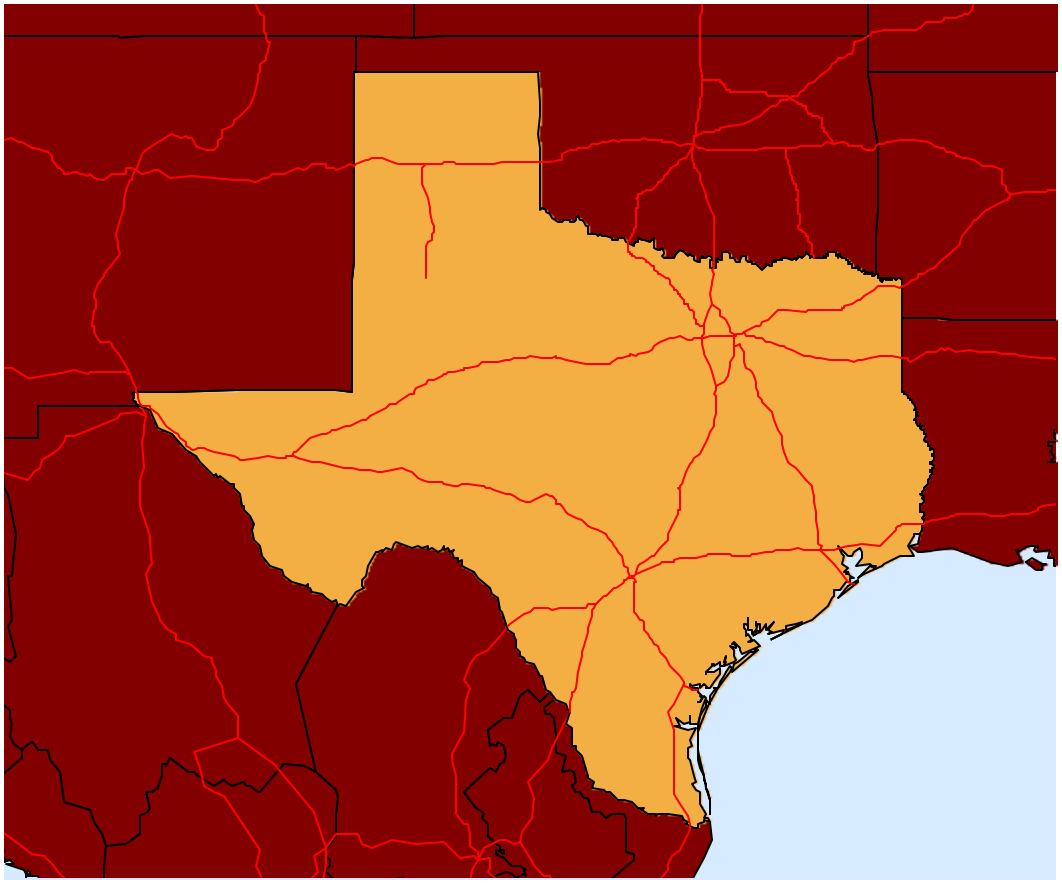






MAKING POLLUTERS PAY:
Environmentally Responsible Ways the 78th Legislature Can Raise New State Funds



Public Citizen

TCPS
TEXAS CENTER FOR POLICY STUDIES

February 2003

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While this report is solely the work of Public Citizen's Texas State Office and the Texas Center for Policy Studies, the following groups have endorsed the report's recommendations: Sierra Club, Lone Star Chapter; Texas Clean Water Action; Sustainable Energy and Economic Development (SEED) Coalition; Environmental Defense; Texas Impact; Blue Skies Alliance; and Texas Campaign for the Environment.

About Public Citizen

Public Citizen is a 125,000 member non-profit organization based in Washington, D.C., with nearly 4,000 members in Texas. We represent consumer interests through lobbying, litigation, research and public education. Public Citizen fights for fair trade, clean and safe energy sources, and corporate and government accountability.

About Texas Center for Policy Studies

Founded in 1983, the Texas Center for Policy Studies (TCPS) brings together the people and the information necessary to ensure that growth and development in our region enhances, rather than diminishes, the quality of life for all residents.

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Two-thirds of Texans live in areas where the air is unhealthy to breathe, according to health-based standards set by the U.S. Environmental Protection Agency. The state's elected leadership needs to enact new ways to increase funding for regulatory enforcement of environmental protections in Texas. At the same time, Texas needs to encourage pollution prevention and more efficient use of natural resources. Public Citizen and Texas Center for Policy Studies encourage the 78th Legislature to seriously consider adopting environmentally responsible fees and taxes at a time when state funds are stretched thin. We believe the ideas in this report are good starting points for a discussion on how best to fund cleaning up the air in Texas. We also believe that these ideas could generate funds to also pay a small portion of Texas' increasing health care costs related to air pollution or to provide state funding for public schools. The five ideas contained in this report are designed to generate about $1 billion during the 2004-05 biennium.

For several years, Public Citizen's Texas State Office, the Texas Center for Policy Studies, and other statewide organizations have been exploring ways to reduce pollution while spreading the cost of air pollution cleanup more equitably among those reponsible for the problem. This report gives the legislature a menu of options to choose from to raise funds to protect public health from air pollution.

Several individuals contributed to the writing and editing of this report. In addition to Cyrus Reed of the Texas Center for Policy Studies, who provided much of the text and editing, Travis Brown, Leslie Hall, and Aneka Patel of Public Citizen were instrumental in the preparation of the report.

For More Information:

Copies of this report are available for free from Public Citizen or Texas Center for Policy Studies. The report is also available on both websites listed below.

Public Citizen's Texas State Office
1002 West Avenue
Austin, TX 78701
(512) 477-1155, Fax (512) 479-8302
http://www.citizen.org/texas

Texas Center for Policy Studies
44 East Ave, Suite 306
Austin, Texas 78701.
(512) 474-0811, Fax (512) 474-7846
http://www.texascenter.org/feeproj
tcps@texascenter.org

I. Introduction

This report outlines five environmentally responsible options that together would generate about $1 billion in new state revenues over the biennium. These options also have the potential to promote environmental responsibility in Texas by encouraging lower industrial emissions, prompting more careful use of natural resources, and offering a better mix of fuels in the energy and transportation sectors.

Just as we impose "sin taxes" on alcohol and cigarettes to pay in part for the detrimental impacts of their use, many economists believe governments should likewise consider taxing activities that generate pollution. Concepts such as the “polluter pays principle” are part of this belief.

Today, these ideas may be more important than ever, given the financial constraints facing the State of Texas. A combination of declining sales tax revenue, higher Medicaid and other health costs, a growing school-age population, and loopholes in the tax structure have conspired to make meeting Texas’ basic needs and services even more challenging. Environmental protection programs will not escape these difficulties, particularly when it comes to funding clean air programs such as the Texas Emissions Reduction Plan and the Title V Operating Permit Program.

In 2001, the Texas legislature passed Senate Bill 5 to set up the Texas Emissions Reduction Plan (TERP), administered jointly by the Texas Commission on Environmental Quality (TCEQ), Texas Comptroller of Public Accounts, the Public Utility Commission (PUC), and the newly created Council on Environmental Technology. Under TERP, these four entities provide and manage grants for a number of consumer, industrial and energy incentive programs designed to reduce emissions. The fund, created in Senate Bill 5, was designed to develop emission-reducing technologies, pay for cleanup and replacement of diesel engines, provide incentives to purchase clean cars, and encourage more efficient energy use.

When the TERP legislation was passed and approved by Governor Perry, the Legislative Budget Board estimated that the plan would generate $133.4 million in FY 2002 and increase to $165.2 million in FY 2006.[1] These funds would be raised through a combination of registration fees, sales tax on older diesel motor vehicles, vehicle inspection fees, and a $225 fee on motor vehicles registering for the first time in Texas.

However, the first-time registration fee was invalidated when the courts ruled it violated inter-state commerce rules. As a result, only 20 percent of the TERP funds have been generated. This is a problem that desperately needs to be corrected. These TERP funds are absolutely essential if Texas is to meet its clean air obligations in Houston, Dallas-Ft. Worth and other areas. If we do not fund these programs, the EPA has announced it will not approve the state’s clean air plans. We propose three new fees to fund portions of TERP: a high-sulfur diesel fuel fee, an annual vehicle registration pollution fee (fee-bate), and a new electric generator fee.

Similarly, Texas’ Title V Federal Air Operating Program must be fully funded to assure that Texas’ large industrial facilities are meeting their statutory and regulatory requirements and that they are achieving their clean air obligations. Unfortunately, this program – run by the TCEQ – is facing serious shortfalls in the coming years. This is due in large part to the “volume discount,” whereby large companies with significant air emissions pay less per-ton than do smaller companies. We propose lifting the existing cap on emissions that can be taxed to fund the Title V program.

[1] Legislative Budget Board, Fiscal Note, SB 5 Enrolled Version, May 23, 2001.

Texas is facing a loss of federal highway funds in non-attainment areas for failing to comply with federal standards and programs. Even more importantly, the health of Texans depends on achieving emissions reductions. Auto and other emissions are detrimental to respiratory health, particularly for children, the elderly and the sick, and the costs of pollution in terms of public health continue to grow.

New fees or taxes on pollution and natural resource extraction could help solve some of the funding needs related to health costs in the state. A recent study found a strong correlation between air pollution – measured in particulate matter – and the use of inpatient and outpatient care among older Medicaid and Medicare users in 183 U.S. metropolitan areas.[2] A 1999 study commissioned by the City of Houston estimated that if the Houston region were to meet clean air standards for ozone and particulate matter in 2007, about $2.9 billion to $3.1 billion would be saved in health care costs.[3]

Also compelling is consideration of the costs of NOT meeting clean air standards in Texas. Estimated losses in state revenues as a result of non-compliance related medical expenses and lost work time and productivity range from $157.4 million to $345.7 million, according to a November 2002 report prepared by The Perryman Group for the Texas Clean Air Working Group.

Simply put, air pollution costs money both to the individual and the state. It makes sense that industries that pollute and consumers who buy their products should pay for some of the costs of treating the victims of polluting. This is especially true at a time when Medicaid costs are rising dramatically, as is the cost of operating the Children's Health Insurance Program. Also, visits to hospital emergency rooms related to the breathing of unhealthy air have increased. We propose using funds from a new coal use tax to help fund the Children's Health Insurance Program.

The paper is divided into five categories of potential revenue options: restructuring current air pollution fees, taxing coal production, initiating consumer incentives such as fee-bates, adopting high sulfur diesel fuel fees, and levying new electricity efficiency fees.

We have tried in this report to quantify the benefits of these options to the state. With Texas facing an official $9.9 billion deficit just to meet current needs over the coming biennium, these options could help raise almost $1 billion for targeted clean air programs and for education and health care programs.

II. Restructuring Current Pollution Fees

Introduction

In addition to paying state taxes, industries and consumers also pay a variety of fees to support state agencies and programs. For example, in FY 2002 nearly $4.4 billion – or about eight percent of total revenues -- flowed to the state in penalties, licenses, fees, fines and permits.[4] Some 80 percent of the TCEQ's FY 2002 annual budget came from fees paid by consumers and the regulated community.[5]

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[2] Fuchs, Victor and Sarah Rosen Frank. "Air Pollution and Medical Care Use by Older Americans: A Cross-Area Analysis," 2002. Available at (http://airmap.unh.edu/assessment/Team/ArticlePDF/Fuchs,2002.pdf).

[3] Lurman, Frederick et. al. "Assessment of the Health Benefits of Improving Air Quality in Houston, Texas," Sonoma Technology, Inc. November 1999, ES-4.

[4] Texas Comptroller of Public Accounts, Texas Revenues by Source, FY 2002.

[5] TNRCC, FY 2002 Operating Budget, August 2002.

During the 2001 legislative session, considerable effort was made to address the fee structures imposed on regulated industries at the TCEQ and other state agencies. As a result, the Railroad Commission of Texas is in the process of raising virtually all of its fees paid by the oil and gas industry. Similarly, the TCEQ has adjusted its fee structure for wastewater discharge permits, public drinking water suppliers, and a variety of air permit and emission fees. Most of these adjustments involved modest increases. By raising fees, the agency can rely less upon general revenues, allowing more state money to be allocated to education and health. Raising fees also means polluters and users of natural resources are required to pay more to account for their actions.

Although significant progress was made during the 2001 legislative session to make polluting industries pay in fees to support the state agencies that regulate them, there is considerable opportunity to make such fees more equitable, so that the largest polluters pay their fair share. Currently, many of these fees have either a cap on the maximum amount that can be paid or a cap on a volume of pollution above which no fees are assessed. This situation provides a perverse incentive to pollute.

The Title V Air Emissions Fee

This report examines ways to adjust one of the more important fees paid by regulated industries, the Title V Air Emissions Fee.

Currently, all facilities in Texas that emit "criteria" air pollutants such as carbon monoxide, nitrogen oxide, and sulfur dioxide must report these emissions annually to the TCEQ and pay a fee per ton of emission. The resulting monies flow to the Clean Air Account No. 151, but by statute are directed to be used to cover the costs of the TCEQ's Title V Air Operating Permit Program. For example, in FY 2002 TCEQ estimated it would spend some $79.66 million under its Clean Air Account, of which some $35.3 million was earmarked for the direct and indirect costs of the Title V Air Operating Permit Program.[6] As such, the Title V Air Emissions Fee is by far the largest fee supporting clean air program at TCEQ. That program includes monitoring, inspecting, assessing and enforcing both the federal and state Clean Air Act.

Until FY 2002, the air emissions fee was set at $26 per ton. However, by statue the fee is capped at 4,000 tons per individual pollutant, meaning that the larger polluters in the state pay less per-ton than those facilities that emit less than 4,000 tons of a particular pollutant. This emissions fee cap is often referred to as the "*volume discount*."

In September 2002, facing declining emission fees and increasing costs to comply with Title V requirements, the TCEQ raised the air emissions fee for the first time since 1995 by adding an inflation adjustment pegged to the Consumer Price Index (CPI). In FY 2003, the fee was increased to $28.63 per ton. Despite this increase, TCEQ staff has already announced that the CPI adjustment will not guarantee sufficient funding for the program in FY 2004 and 2005 and that it will have "to review the air fee increases adopted…to determine the appropriate levels for….the air fees." [7]

A TCEQ study published in January 2003 found that the Air Emissions Fee would bring in about $36.9 million in FY 2003 (at $28.63 per ton), while the total costs for the program would be $37.3

[6] TCEQ, "Projected 02 Direct and Indirect Tile V Cost," August 2002.
[7] Texas Register, Texas Commission on Environmental Quality, Chapter 101-General Air Quality Rules, Rule Log No. 2002-041-116-AI, page 4.

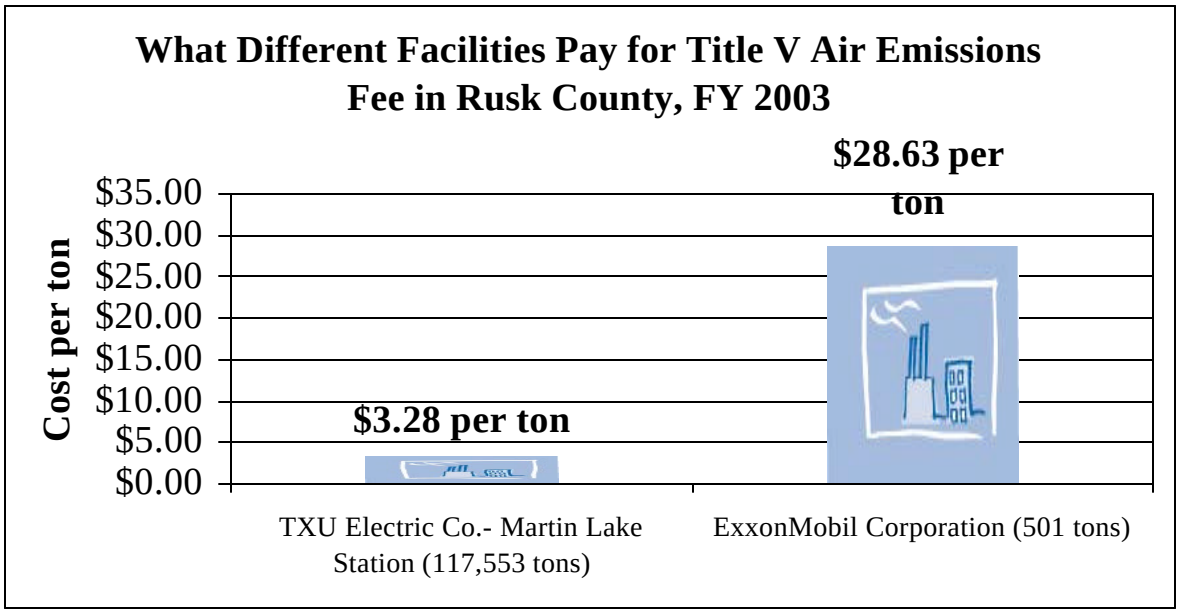
million. An even bigger deficit was predicted for FY 2005, when TCEQ projects the fee will bring in $35.6 million, while costs for the program are expected to be more than $40 million.

One way to raise revenues to cover the cost of the program would be to either eliminate the 4,000-ton emissions cap or raise the cap from 4,000 tons to 8,000 tons. In the process, the per-ton fee might be lowered for all industries, while still raising more money to pay for air quality programs. Both ideas were pursued in the 77th legislative session, with the second being stripped out in conference committee of the TCEQ's sunset bill after being accepted unanimously by the Senate.[8] Most recently, Senator Gonzalo Barrientos has introduced a bill – SB 171 -- to the 78th Legislature which would raise the air emissions cap from 4,000 to 8,000 tons per pollutant and require that TCEQ consider lowering the overall fee per ton.

Impacts of Air Emission Fees on Different Industries

Because of the "volume discount," the largest industrial facilities pay considerably less per-ton than do smaller ones. For example, the chart below shows that the four facilities emitting more than 100,000 tons of pollutants annually paid an average of $3.28 per ton, while those facilities emitting less than 4,000 tons annually paid the full $28.63 ton fee (see **Table 1**).

Most of the facilities that enjoy a volume discount are located in the eastern or northeastern part of the state. Seven of the eight biggest emitters in the state are coal or lignite-burning power plants, including Alcoa's power generating units at its Rockdale smelter (see **Table 2**). Revenue losses by the state and disincentives for industries to reduce pollution due to these caps are significant. While the economy has grown and companies have worked to reduce air pollution, revenue from fees on air pollution are expected to fall in coming years, leaving the TCEQ with a negative fund balance in the Clean Air Account for FY 2005. In FY 2003, if the 51 facilities that emitted one or more pollutants in excess of 4000 tons/year were assessed the full $28.63/ton fee, the state would have gained $27 million (see **Table 3**).



[8] The amended version of HB 2912 – the TNRCC Sunset Bill – included an amendment offered by Senator Gonzalo Barrientos to raise the air emissions fee cap from 4,000 to 8,000 tons per pollutant which was unanimously approved by the Senate. However, in conference committee the amendment was stripped.

Table 1. Total Emission Fees Assessed, Air Pollutant Emissions, and Average Fee Rates By Ton, FY 2003

Facilities Grouped by Tons of Emissions	**Number of Accounts**	**Total Tons Emitted**	**Total Emissions Assessed a Fee**	**Emissions Fee, Estimated**	***Average Dollar per Ton Cost***
Over 95,000	4	441,574	61,206	$1,752,328	***$3.97***
50,000 to 95,000	4	241,754	46,580	$1,333,585	***$5.52***
8,000 to 50,000	39	733,214	373,506	$10,693,477	***$14.58***
4,000 to 8,000	46	242,297	231,710	$6,663,857	***$27.83***
Under 4,000	1,639	584,888	585,613	$16,766,100	***$28.63***
TOTAL	1,732	2,243,728	1,471,468	$37,179,347	***$16.57***

Source: Calculated by authors from "FY 2003 Air Emissions Fee Data" provided by TCEQ, November 2002.

Rather than simply lifting the cap and assessing the full $28.63/ton fee on all emissions, another option would be to reduce the dollar per-ton cost while removing the cap. For example, if the fee was lowered to $18/ton and the cap was lifted, the state would gain the same amount – or slightly more -- of revenue, but the cost would be more equitably distributed among large and small facilities (see **Table 4**).

The federal government allows states to adjust their fee collections and satisfy the fee demonstration requirement for Title V by providing EPA with a "detailed fee demonstration" if fees are less than the $25 (adjusted) per ton per year fee (EPA, Title V Fee Demonstration and Additional Fee Demonstration Guidance, Nov. 1993).

The fee change would affect different sized facilities in various manners, as facilities releasing large amounts of pollution would pay more per-ton and facilities releasing small amounts would pay less.

Another option would be to raise the air emissions cap from 4,000 to 8,000 tons. **Table 5** shows how such a change would impact different categories of companies. An analysis of the FY 2003 Emissions Fee Database shows that only about 50 of these companies would be impacted by this change, only about 30 of them significantly (more than $50,000). In the process, about $7 million more would be raised to adequately fund the Title V Program, or alternatively, fees could be reduced for the vast majority of fee payers.

In conclusion, we recommend that the 78th Legislature change the Title V air emission fee to either eliminate or reduce the "volume discount." Doing so would raise more revenues for the Clean Air Program and give large industries an economic incentive to reduce pollution. (By charging the most-polluting industries more, the TCEQ might also be able to reduce fees for all industries overall.)

Table 2. Top Eight Polluters and Fee They Were Assessed Per Ton in FY 2003

Facilities Grouped by Tons of Emissions	Company	County	Total Tons	Avg. Cost Per Ton Based on Total Emissions
Over 95,000 tons	TXU Electric Co.	Titus	127,416	$3.65/ton
	TXU Electric Co.	Rusk	117,553	$3.28/ton
	TXU Electric Co.	Freestone	98,915	$3.86/ton
	ALCOA	Milam	97,690	$5.32/ton
50,000 to 95,000 tons	Reliant Energy	Fort Bend	72,182	$5.25/ton
	American Electric Power	Titus	60,910	$6.50/ton
	Lower Colorado River Authority	Fayette	55,545	$6.17/ton
	Cabot Corporation	Gray	53,117	$4.07/ton

Source: Calculated by authors from "FY 2003 Air Emissions Fee Data" provided by TCEQ, November 2002.

Table 3. What would different size facilities pay if emissions fee cap were lifted?

Facilities Grouped by Tons of Emissions	**Number of Accounts**	**Total Tons Emitted**	**Total Assessed With Cap at 4,000 Tons at $28.63/ton**	**Total That Would Be Paid Without a Cap at $28.63/ton**	**Difference**
Over 95,000	4	441,574	$1,752,328	$12,642,264	$10,889,936
50,000 to 95,000	4	241,754	$1,333,585	$6,921,431	$5,587,846
8,000 to 50,000	39	733,214	$10,693,477	$20,991,913	$10,298,436
4,000 to 8,000	46	242,297	$6,663,857	$6,936,971	$273,114
Under 4,000	1,639	584,888	$16,766,100	$16,766,100	$0
TOTAL	1,732	2,243,728	$37,179,347	$64,237,935	$27,058,588

Source: Calculated by authors from "FY 2003 Air Emissions Fee Data" provided by TCEQ, November 2002.

Table 4. What would different size facilities pay if emissions fee cap were lifted but per ton charge were decreased to $18/ton?

Facilities Grouped by Tons of Emissions	**Number of Accounts**	**Total Tons Emitted**	**Total Paid With Cap at 4,000 Tons at $28.63/ton**	**Total That Would Be Paid Without a Cap at $18/ton**	**Difference**
Over 95,000	4	441,574	$1,752,328	$7,948,332	$6,196,004
50,000 to 95,000	4	241,754	$1,333,585	$4,351,581	$3,017,996
8,000 to 50,000	39	733,214	$10,693,477	$13,197,850	$2,504,373
4,000 to 8,000	46	242,297	$6,663,857	$4,361,351	($2,302,506)
Under 4,000	1,639	584,888	$16,766,100	$10,528,441	($6,237,659)
TOTAL	**1,732**	**2,243,728**	**$37,179,347**	**$40,387,555**	**$3,208,208**

Source: Calculated by authors from "FY 2003 Air Emissions Fee Data" provided by TCEQ, November 2002.

Table 5. What would different size facilities have paid in FY 2003 if emissions fee cap were raised from 4,000 to 8,000 tons?

Facilities Grouped by Tons of Emissions	**Number of Accounts**	**Total Tons Emitted**	**Total Paid With Cap at 4,000 Tons at $28.63/ton**	**Total That Would Be Paid With a Cap at 8,000 tons at $28.63/ton**	**Difference**
Over 95,000	4	441,574	$1,752,328	$3,142,372	$1,390,044
50,000 to 95,000	4	241,754	$1,333,585	$2,187,303	$853,718
8,000 to 50,000	39	733,214	$10,693,477	$15,363,226	$4,669,749
4,000 to 8,000	46	242,297	$6,663,857	$6,936,971	$273,114
Under 4,000	1,639	584,888	$16,766,100	$16,766,100	$0
TOTAL	***1,732***	***2,243,728***	***$37,179,347***	***$44,514,266***	***$7,334,919***

Source: Calculated by authors from "FY 2003 Air Emissions Fee Data" provided by TCEQ, November 2002.

III. Taxing Coal: Promoting Energy Efficiency and Raising Revenues

Introduction: Energy Extraction and Taxes in Texas

While producers of oil and natural gas in Texas are required to pay significant fees and taxes to the state, most other natural resource extraction industries pay only minimal fees and taxes (see **Table 6**). One way Texas could generate new revenues would be to increase fees and taxes on coal mining, uranium mining, and timber felling. Among these three industries, coal production would provide the largest source of additional revenues. (The burning of coal is a major contributor to the state's air pollution problems. Increasing fees and taxes on its production would help make polluting industries in Texas pay for their part in contributing to the state's air quality woes.)

Natural gas producers in Texas pay 7.5 percent of the market value of gas produced in the state. This tax raised $628 million in FY 2002. While this amount is significantly less than the amount raised in FY 1985, when more than $1.2 billion was raised from the natural gas production tax, it still represents 2.4 percent of the state's tax collections and 1.1 percent of all revenues collected.[9] Oil producers in state pay 4.6 percent of the market value of the oil they produce, or 4.6 cents on every 42 standard barrel of oil, whichever is more. In FY 2002, this tax raised more than $338 million, or 1.3 percent of the taxes collected and 0.6 percent of total revenues. Taken together, these two "severance" taxes raised nearly $1 billion dollars for the state even at a time when gas and oil prices were relatively low.

Oil and natural gas producers also pay regulatory fees and taxes. Oil producers must pay an oilfield cleanup fee, which was recently doubled from 5/16 to 5/8 of 1 cent on each barrel of 42 standard gallons produced. Oil producers also must pay a regulatory tax of 3/16th of 1 cent per standard barrel. Natural gas producers pay an oilfield clean-up fee, recently doubled from 1/30th of 1 cent to 1/15th of 1 cent for each 1,000 cubic feet of natural gas. To help clean up oil spills and leaking underground storage tanks, additional fees are imposed upon transfer of crude oil to or from marine vessels and upon the import or withdrawal of petroleum products from bulk storage facilities.

[9] Texas Comptroller of Public Accounts, Texas Revenue History by Source, 1978-2002

Table 6. Severance and Regulatory Taxes and Fees on Natural Resource Extraction and Use in Texas

Fuel Type	Tax	Money earned for state in FY 02
Crude Oil Production Tax	4.6 percent of market value of oil produced within state or tax of 4.6 cents per barrel of 42 standard gallons of oil; or 2.3 percent of market value for recovery projects.	$338.7 million
Crude Petroleum Regulatory Tax and Oil field Cleanup Regulatory Fee	Regulatory fee of 5/8th of 1 cent and regulatory tax of 3/16th of 1 cent assessed on each 42-gallon barrel.	$2.2 million
Natural Gas Production Tax	7.5 percent of market value of gas produced and saved within the state	$628.5 million
Regulatory Fee	1/30th of 1 cent on 1,000 cubic feet of gas saved (Raised to 1/15th of 1 cent on Sept 1, 2001.)	$2.5 million
Coastal Protection Fee	A fee of 2 cents per barrel of crude oil or condensate is imposed on all crude oil and condensate transferred from or to vessels at a marine terminal located in Texas	$25 million
Petroleum Products Delivery Fee	A fee[10] is collected by bulk facility operators (rail, pipeline, barge, or refinery terminals) upon the withdrawal of petroleum products into cargo tanks and on petroleum products imported into Texas	$74.9 million
Uranium Severance Tax	None	$0
Coal or Lignite Production Occupation Tax	None	$0
Mining Regulatory Fee	$120/acre of acres actively being mined	$400,000
Timber Felling Severance Tax	None	$0
TOTALS		***$1,072.2 million***

Coal Severance and Use Taxes

Texas is the country's largest user of coal. The state also is the country's fifth largest producer of coal, mining more than 53,000 short tons at 14 surface mines in 1999. More than 98 percent of this coal is used to fuel electric power plants.[11] In fact, some 40 percent of electricity generated in

[10] Varies from $12.50 to $25 per truck according to the net total gallons of all petroleum products withdrawn.
[11] U.S. Department of Energy, Energy Information Agency, "Texas Coal Statistics, 1990-99."

Texas comes from burning coal or lignite.[12] Yet, Texas earns relatively little money for state revenues from this coal production.

Unlike oil and gas production, there is no severance tax on the market value of coal. The absence of such a severance tax encourages its use as a basic fuel in Texas, despite its high environmental costs. Virtually all of the coal mined in Texas is high-sulfur, low-quality lignite.

Texas coal is among the nation's dirtiest in terms of its sulfur content and the emissions that result from its combustion. (Texas imports about 45 percent of its coal, mostly from Wyoming.) Coal mined in Texas and used to generate electricity has an average sulfur content of 0.97 percent. However, the average sulfur content for all coal -- both imported and Texas-mined -- has an average sulfur content of 0.65 percent.[13]

The use of coal in Texas has serious environmental and public health consequences. As mentioned, the top eight polluters in Texas are all power plants or industrial facilities that burn coal or lignite. About 85 percent of all air pollution from power plants in Texas occurs at power plants that burn coal and lignite, directly contributing to the smog (ozone) problems in cities such as Dallas, Houston and Longview.[14] In addition, 18 coal-fired power plants in Texas reported releasing more than 9,300 pounds of highly toxic mercury air emissions in 2000, or about 10 percent of all mercury emitted by power plants throughout the U.S.[15]

Along with producing criteria air pollutants and mercury, coal-fired power plants in Texas are leading producers of particulate matter that causes respiratory problems when ingested into the lungs. These power plants also contribute to regional haze, which impacts both health and visibility. A 2002 medical study found that long-term exposure to combustion-related fine particulate matter air pollution – such as that emitted by coal-fired power plants – is an important environmental risk factor for both cardiopulmonary and lung cancer mortality.[16] Another 2002 study found that more than 1.5 million children in Texas live within 30 miles of a coal-fired power plant, and more than 90,000 of these children suffer from asthma.[17]

These power plants also emit large amounts of carbon dioxide, one of the leading contributors to global climate change. A recent profile of the leading utilities in the U.S. found that the two largest utilities in Texas – TXU and Reliance Energy – both ranked in the top 10 in emissions of mercury and of carbon dioxide.[18] Texas coal-burning power plants also lead the nation in mercury emissions with more than 9,300 pounds a year, according to the EPA's most recent Toxic Release Inventory.

Coal producers do pay some minimal fees to the state. Texas charges a permit fee for coal mining sites of at least $5,000 for a new permit, $3,000 for a renewal, and $500 for revising a permit. In addition, the Railroad Commission, which regulates the coal industry in Texas, assesses an annual fee for each acre of land from which coal is extracted. The amount cannot exceed $120 per acre. These mining fees raise between $400,000 and $500,000 for the Railroad Commission's fund to

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[12] EIA, "Electricity Generation by Fuel, 1990-1999 Texas."
[13] Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."
[14] Calculated by authors from "FY 2003 Air Emissions Fee Data" provided by TCEQ, November 2002.
[15] Environmental Protection Agency, 2000 Toxics Release Inventory.
[16] Pope III, C. Arden, et al. "Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution," *Journal of American Medical Association*, Vol. 287, No. 9 (March 6, 2002).
[17] SEED Coalition, "Children at Risk: How Air Pollution from Power Plants Threatens Health of America's Children," 2002.
[18] Natural Resource Defense Council, *Benchmarking Air Emissions of the 100 Largest Utilities in the U.S. in 2000*, NRDC, 2002.

help pay for reclamation of abandoned coal mining land. There is no state "cleanup" fee on coal mining, as there is on the production of oil and gas. But the federal government does impose a production tax used to close abandoned mines and clean up and reclaim land used in mining.

The absence of state taxes or fees on coal production is striking especially when compared to the taxes and regulatory clean-up fees paid by the other major energy extractive industries in Texas. Some have argued that a severance tax on coal production in Texas result in more out-of-state coal being imported, and a loss of jobs in Texas. Other states have adopted severance or other types of taxes on coal production to raise state monies and help offset some of the environmental degradation caused by coal mining without significant job losses. Of the 15 other major coal-producing states in the U.S., 12 have revenues exceeding Texas from coal taxes and fees, both overall and in rate per ton.

The options for adopting a coal tax in Texas include:

- *A Coal Use Tax*. In the 2001 legislative session, House Bill 2901 sought to tax all coal and lignite either purchased or used in Texas at the rate of 7.5 percent of purchase price, the same rate as the severance tax on natural gas. The Comptroller of Public Accounts estimated it would generate about $110 million per fiscal year. Similar bills were introduced in 75th (HB 2657) and 76th (HB 3608) sessions. (It should be noted that imposing such tax rates would NOT put Texas coal mining at a competitive disadvantage compared to other fuel sources.)

- *A Coal Production or Severance Tax*. Rather than taxing coal use at industries and utilities, only coal mined in Texas would be taxed. The disadvantage to such a tax is that it might make coal produced in the state more expensive than coal imported from other states. (All of the coal currently imported into Texas already is subject to severance taxes in its state of origin.)

Whether a coal use or severance tax was adopted, there are several options in terms of the tax rate. One would be to tax it at the same rate as either oil (4.6 percent of value) or gas (7.5 percent). Another option would be to make the rate equal to those of another large coal-producing state. West Virginia, New Mexico, Montana, and Wyoming are among the states that raise the most money from coal mining taxes and fees. **Table 7** shows the amount that could be raised annually in Texas, based on 1999 mining rates and coal costs, and the effective cost per ton in 2000 dollars of the other state's systems. It should be noted that the West Virginia legislature recently raised its environmental tax (reclamation tax) to $0.14 cents per ton to cleanup 275 strip-mining sites. The measure is expected to raise more than $20 million per year.[19]

This report recommends that the 78th Legislature impose a 7.5 percent coal use tax in Texas, with those monies flowing to general revenues. This tax would generate about $270 million over the biennium, based on current coal use figures. That money could be used to offset rising health care costs or help finance public education.

Such a tax might raise even more than money projected here because of regulatory changes occurring in Washington. Recent actions by the Bush administration may prompt an increase in the burning of coal to generate power in Texas and the U.S. The Environmental Protection Agency has announced changes in provisions of the Clean Air Act known as "New Source Review". These

[19] Tax Analysts, State Tax Notes, September 24, 2001, p. 941.

changes will make it easier for older coal-burning power plants to expand without adding pollution control equipment. The Bush administration also is seeking new subsidies and incentives for coal.

Table 7. Possible options for a coal severance or use tax in Texas

State / Method	Tax Rate	Taxes Collected in 2000	Effective Cost / Ton	Texas Coal Production Severance Tax	Texas Coal Use Tax
				Based on 1999 coal production (53,000 thousand tons)	Based on 1999 coal use (102,000 thousand tons)
New Mexico	Severance: $1.17/ton for old coal mines: $0.50/ton for new coal mines Resource Excise Tax: 0.75 percent Gross Receipts Tax: 5.75 percent Conservation Fund: 0.18 percent	Severance: $26.9 million Resource Excise: $3.7 million Gross Receipts: $17.7 million Conservation: $930,000	$1.82/ton	$96.5 million	$185.6 million
Wyoming	Severance: Surface: 7 percent Underground: 3.75 percent	$85.1 million in FY 00	$0.27/ton	$14.3 million	$27.5 million
Montana	Severance: Surface 10 – 15 percent depending upon BTU Underground: 3-4 percent depending upon BTU Resource Indemnity Fund: $25 + 0.4 percent over $6,250	Severance: $35.5 million Resource Indemnity: $1 million	$0.85/ton	$45.1 million	$86.7 million
West Virginia	Severance: 5 percent of gross value or $0.75/ton minimum; 5 percent tax on value added Environmental Tax: $0.05/ton	Severance: $163 million in Calendar Year 99: Environment: $8.1 million in CY 99.	$0.98/ton	$51.9 million	$100 million
Texas Oil Severance Tax	4.6 percent of market value		Assumes cost of $12.75 per/ton of Texas coal and $18.0 per/ton of all coal used	$31.0 million	$84.5 million
Texas Gas Severance Tax	7.5 percent of market value		Assumes cost of $12.75 per/ton of Texas coal and $18.0 per/ton of all coal used	$50.6 million	$137.7 million

IV. Fee-bates: Clearing the Air Through Consumer Incentives

Introduction

Fee-bates offer a promising option for cleaning up Texas skies.

Under a fee-bate program, buyers of new cars would be required during each annual state registration to pay a fee based on how much their vehicle contributes to air pollution. Such a program would quantify the damage done by a vehicle's pollution each year, rewarding cleaner cars while penalizing dirtier ones.

Alternatively, a slightly higher state vehicle sales tax could be charged to consumers who buy new cars with higher pollution potential. (Both a fee-bate or an additional sales tax would apply only to new car purchases and would not be retroactive.)

In fact, there already is the beginning of a fee-bate system in Texas. Currently, diesel trucks of a certain size pay an 11 percent surcharge on their annual registrations. Under the TERP legislation passed in 2001, truck buyers also pay a 2.5 percent surcharge on the purchase of diesel-powered on-road motor vehicles with a gross vehicle registered weight exceeding 14,000 pounds and with a model year of 1996 and earlier, since those vehicles emit more pollution. Also under TERP, Texans purchasing clean cars – currently four models have been certified -- are eligible to receive a rebate from the state beginning in April of 2003.

As it stands, everyone pays the price for auto emissions pollution. A 2002 study that appeared in the Journal of the American Medical Association examined the effects of just one pollutant, particulate matter, and found that the chances of death due to heart and lung disease increased dramatically with exposure to air pollution. Fee-bates would help make the economics of buying a new car incorporate the vehicle's environmental and health effects.

Incentives in Texas to get cleaner vehicles on the streets must be consumer driven, unless the state adopted a regulatory mandate such as California's "Zero Emissions Vehicles" standard to motivate manufacturers.

An additional "pollution" fee each year at registration – or upon the purchase of their car -- would not only remind consumers of the costs of pollution, it would also encourage the purchase of cleaner cars. The purpose of these fees is to motivate, not to punish those who already drive dirty cars and can perhaps not afford to replace them: the system would only apply to new vehicles.

Methods for assessing fee-bates vary. An annual additional vehicle registration fee could reflect the fuel efficiency and lower emissions of certain cars. Alternatively, the motor vehicle sales tax could be adjusted upward or downward depending upon the amount of emissions generated by a particular vehicle. Either method could be revenue-neutral or revenue-generating; in the latter case, those monies could help fund other pollution-reducing initiatives such as TERP. As noted previously in this report, TERP is especially in need — its budget was slashed, rendering it inoperative without about $160 million in additional funds per year.[20] Generating that money could be an important goal of fee-bates.

[20] The TCEQ estimates that the program will need $188 million in FY 2004 and FY 2005 to achieve its clean air mandate. Currently, fees associated with TERP are generating about $20 million a year.

A Texas Fee-bate Program

A fee-bates plan could utilize the eight standard Bin rankings already used by the EPA and TCEQ (**Table 8**). It could assess fees and rebates based on how much each vehicle pollutes, with exemptions allowed for registered farm vehicles. In this simple model, bigger polluters would pay bigger fees.

Table 8. Bin Rankings for passenger cars, light trucks and medium duty vehicles (MY 2004)

	NMOG	Carbon Monoxide	Nitrogen Oxide	Particulate Matter	HCHO
Bin 8	.125	4.2	.20	.02	.018
Bin 7	.090	4.2	.15	.02	.018
Bin 6	.090	4.2	.10	.01	.018
Bin 5	.090	4.2	.07	.01	.018
Bin 4	.070	2.1	.04	.01	.011
Bin 3	.055	2.1	.03	.01	.011
Bin 2	.010	2.1	.02	.01	.004
Bin 1	0	0	0	0	0

Source: TCEQ

Several options exist for assessing annual registration pollution fees (see Table 9). Annual fees on vehicles might be assessed based on the health impacts of the pollution they emit. Estimates of the per mile health costs of driving range from 84 cents to 3.95 cents.[21] Assuming vehicles are driven an average of 10,000 miles annually, fees would be levied at $84 for the cleanest cars, such as a Honda Insight, and up to $395 for the dirtiest, such as the Cadillac Escalade. A Chevy Suburban[22] would pay $348. A Pontiac Grand Am, which emits the median amount of pollution for a car, would pay $196. A Ford Explorer, with median emissions for a light truck, would pay $273. The annual registration notice sent to car owners also could include a notice regarding the new car incentive program and air pollution from autos.

A second option would be to charge an annual fee based upon the costs of funding TERP. Vehicles in Bin 1 might receive an annual $50 rebate while large SUVs and other big polluters would pay several hundred dollars each year at registration. If the statewide annual average pollution registration fee was $82, the first year of the program could make up the missing TERP funding, along with helping to clean the air and making clean cars attractive economically.

[21] Several groups have quantified health and environmental costs of driving, per mile. Our data is based on ACEEE (American Council for an Energy Efficient Economy)'s Green Book, the 2002 model year data, available online at www.greenercars.com. ACEEE evaluates the costs, based on emissions, for every make and model of cars sold in America. Another report that gives more general numbers is: "The health and visibility cost of air pollution: a comparison of estimation methods;" Delucchi, Mark A., James J. Murphy and Donald R. McCubbin; *Journal of Environmental Management* (2002) 64, 139–152, available online at http://www.idealibrary.com. It evaluates the public health cost per mile of driving to be $.03.

[22] All cars were evaluated for MY 2002. The specs are as follows: Honda Insight, 1.0 L 3 auto CVT; Cadillac Escalade, 6.0 L 8 auto Awd; Chevy Suburban, K1500, 5.3 L 8 auto 4wd; Pontiac Grand Am; 3.4 L 6 auto; and Ford Explorer, 4.0 L 6 auto.

Our recommendation for fee-bates would be to set them low, at an average of $11 per vehicle annually. This fee would fund only the part of the TERP that provides at-purchase rebates for clean cars and would help provide incentives to buy low-emitting vehicles without overtaxing consumer pocketbooks.

Table 9. Options for Assessing Fees/Rebates Under a Texas Fee-bate Program

Options for assessing fees/rebates		Revenue generated in year one
Health Costs	Assess fees based on health impacts. The health cost per vehicle mile traveled ranges from $.008 - $.04. If cars average 10,000 miles/year, the fees should range from $80 - $400. The average fee would be about $250.	$450 million
Program funding	Charge a graduated fee annually, at registration, to new vehicles in the dirtiest bins, and give an annual rebate to cars in the cleanest. Set the fee-bates at levels so that the statewide average is an annual fee of about $80.	$150 million (Full TERP funding)
Rebate funding	Charge the graduated fee at an average of $11 per vehicle, so that the funds raised are about $20 million, enough to fund the section of TERP that provides at-purchase rebates on clean cars.	$20 million (partial TERP funding)

Discussion of Fee-bate Benefits

Fee-bates would encourage clean car purchases, bringing Texas closer into compliance with federal clean air standards. Fee-bates also could fund state clean air programs currently in jeopardy. But to effectively change consumers' buying habits, fees must be large enough to tip the balance in the minds of consumers to choose cleaner cars. A study by the American Council for an Energy Efficient Economy (ACEEE) indicates that imposing a fee-bate of 5-10 percent of a vehicle's price achieves substantial fuel conservation[23]. To a point, the bigger the fee, the more motivating power it has, and the more good the funds it raises can do.

In a recent survey, 77 percent of Texans[24] believe air pollution is a serious problem—and almost half believe it is getting worse. Still, Texans are willing to participate in solutions. Some 63 percent favor adopting a fee-bates program that would fund other clean air initiatives such as TERP and encourage consumers to buy clean cars.

Fee-bates offer an effective, market-based solution to cleaning the air in Texas and also the opportunity to generate funds to cover health costs and either fund the beleaguered TERP or at least cover the costs of the TERP rebate program.

The economic incentives and disincentives offered by fee-bates will not by themselves solve Texas' air quality problems, but they would help send strong signals that remind consumers and manufacturers that the choices they make affect everyone's health.

[23] DeCicco, John and Gordon, Deborah, ACEEE, "Steering with Prices: Fuel and Vehicle Taxation H1993.
[24] Public Citizen, Texas statewide survey on the environment, American Viewpoint, August 2002, http://www.citizen.org/texas/.

V. High Sulfur Diesel Fee

Introduction

Authorized in Senate Bill 5 during the 77th Texas Legislature in 2001, the Texas Emissions Reduction Plan (TERP) provided grants and other incentives for improving air quality throughout the state. A major component of TERP involves cleaning up diesel engines in heavy-duty trucks. Pollution emitted by diesel engines contributes greatly to our nation's continuing air quality problems.

In the U.S., diesel engines:

- produce 26 percent of nitrogen oxide (NOx) from all on-road sources
- produce 20 percent of NOx from all sources
- produce 66 percent of particulate pollution from on-road sources
- produce 26 percent of particulate pollution from all fuel combustion sources.

Even with the stringent diesel truck engine standards that take effect in 2004, these engines will continue to emit large amounts NOx and particulate matter (PM). Both of these components contribute to serious public health problems in the United States, especially in urban areas.[25]

However, the cleanup of diesel engines was delayed after 75 percent of TERP funding was cut from the program as a result of lawsuits challenging the constitutionality of some of the TERP provisions. With TERP funding stalled, Texas should consider other alternatives to fund these environmental improvements.

State Rep. Warren Chisum, R-Pampa, has proposed a $5 to $10 per vehicle emission impact fee to help raise state revenues for TERP funding. One problem with this proposal is that while the proposed fee also would apply to off-road diesel fueled vehicles, collection of that fee on these unregistered vehicles would be totally dependent on voluntary participation by their owners. And in Texas, voluntary payment of state fees and taxes has a notoriously poor record.

One alternative to Rep. Chisum's proposal would be to institute an additional fee on the use of diesel fuels with a high sulfur content. Under such a plan, those using diesel fuels with a high sulfur content would contribute to funding TERP and cleaning up diesel motors. Currently, off-road diesel companies pay only 20 percent of the cleanup efforts.

In the coming years, Texas will be required to meet new state and national sulfur standards for diesel fuels. (Higher sulfur levels not only result in more emissions, but also limit the kinds of pollution controls that can be installed on engines.) The maximum sulfur content of diesel fuels used in on-road vehicles must be reduced from 500 ppm to 15 ppm statewide, beginning June 1, 2006. The maximum sulfur content for non-road equipment must be reduced to 15 ppm in 110 counties in Central and East Texas. The petroleum industry claims that producing low-sulfur fuels will cost about five-cents per gallon. Until those new standards take effect, the state might consider introducing a fee at the wholesale level of production for high-sulfur diesel fuel. Low-sulfur

[25] Pope, C. Arden III, Burnett, Richard T., Thun, Michael J., Calle, Eugenia E., Krewski, Daniel, Ito, Kazuhiko, Thurston, George D., *Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution*, JAMA, March 6, 2002. EPA sets average annual limits on fine particulate matter at 15 micrograms per cubic meter. The study found that, for every 10-microgram increase, the number of lung cancer deaths increased 8 percent, and all heart and lung-related deaths increased by 6 percent. 500,000 people in over 100 cities participated.

fuel is already available, but in limited quantities. A high-sulfur diesel fee would encourage the more immediate use of low-sulfur fuel.

In FY 2000, some 228 million gallons of diesel were sold in Texas for off-highway use and about 2.8 billion gallons of diesel were sold for on-highway use. So, a 5 cent per gallon fee could generate about $150 million for the state. These monies could allow the Texas Legislature to fund a diesel retrofit program through fiscal year 2007. A 5 cent high-sulfur fee would be structured to "sunset" soon after the new state and federal diesel standards are implemented in June 2006. A 5 cent high-sulfur diesel fee imposed beginning in FY 2004 could nearly fund TERP for three years.

Health Effects of Diesel Emissions in Texas

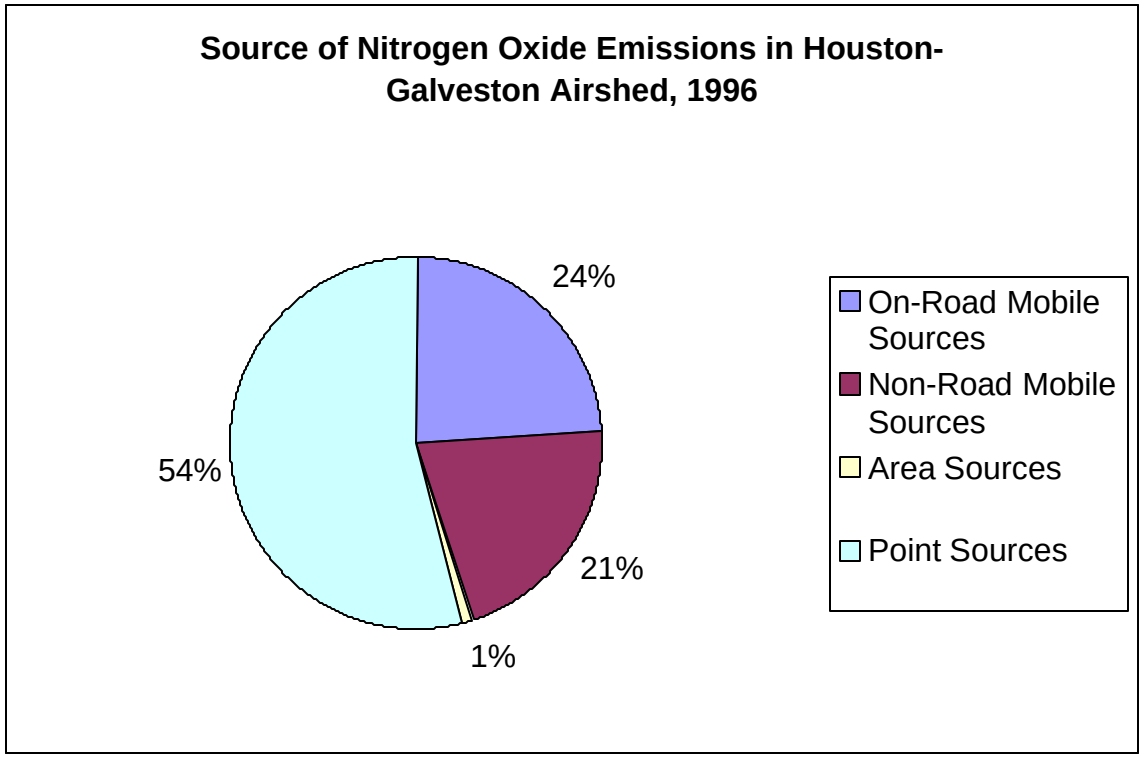
Emissions from diesel engines contribute greatly to the ozone problem in major metropolitan areas of Texas. In the five-county Central Texas metropolitan area, on and off-road diesel engines contribute 40 percent of all NOx emissions from mobile sources and 23 percent of all NOx emissions, according to a 1999 emissions inventory[26]. In the Houston-Galveston and Dallas-Fort Worth non-attainment areas, diesel engines also are major contributors to NOx emissions, contributing to 35 and 45 percent of all on-road and off-road NOx emissions (see related graphs). These NOx emissions contributes to the formation of ozone, which affects asthma and other respiratory ailments. In addition to ozone, in 1996 Texas emissions of diesel soot from mobile sources totaled 27,100 tons, 64 percent of particulate matter from all sources. Diesel exhausts from both on-road and off-road engines also are a significant source of some of the most deadly kinds of toxic air pollution in Texas. Diesel exhaust is a mixture of more than 450 different components, including toxic gases and fine particles. More than 40 chemicals in diesel exhaust are considered toxic and have been linked to cancer and the disruption of the reproductive system. **Texas residents on average face a one-in-2,747 risk of getting cancer from pollutants in the outdoor air, which is 364 times greater than the one-in-one-million health protective standard established in the Clean Air Act.** *Eighty-eight percent of this added cancer risk is from the filthy soot released by diesel-powered trucks, buses, construction and farm equipment.*[27] Both the formation of harmful ozone and cancer-related deaths can be reduced in Texas if the Legislature takes action this session to fund a diesel cleanup program and a clean car incentive program.

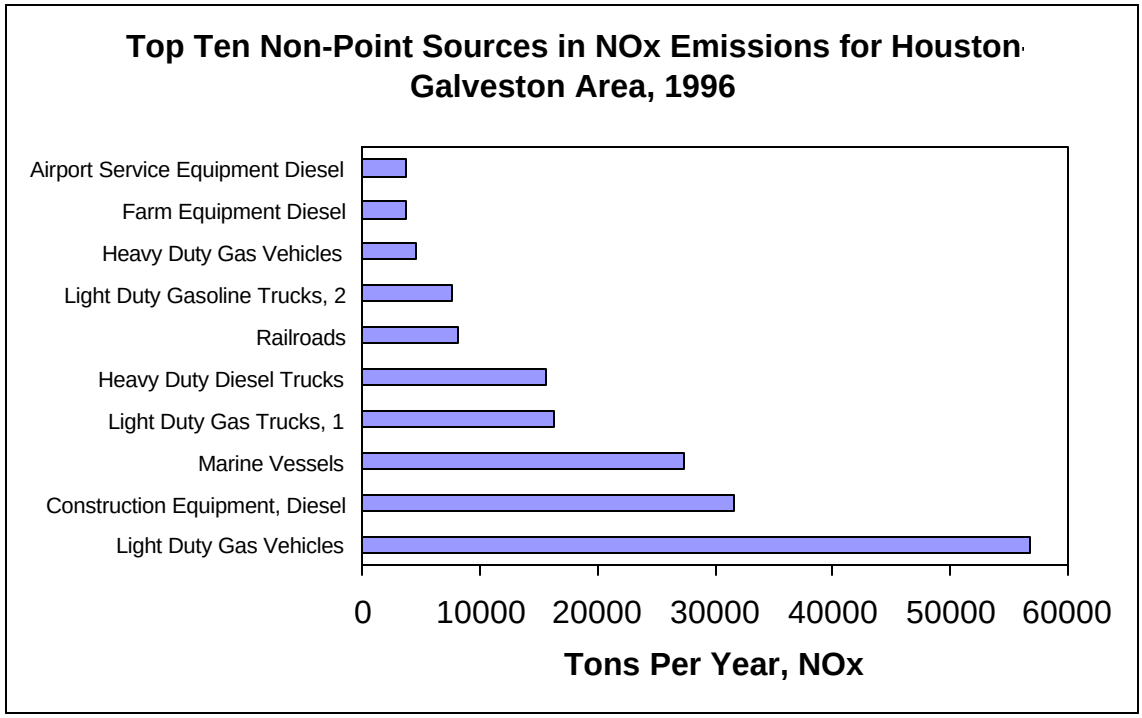
Summary on Diesel Fee

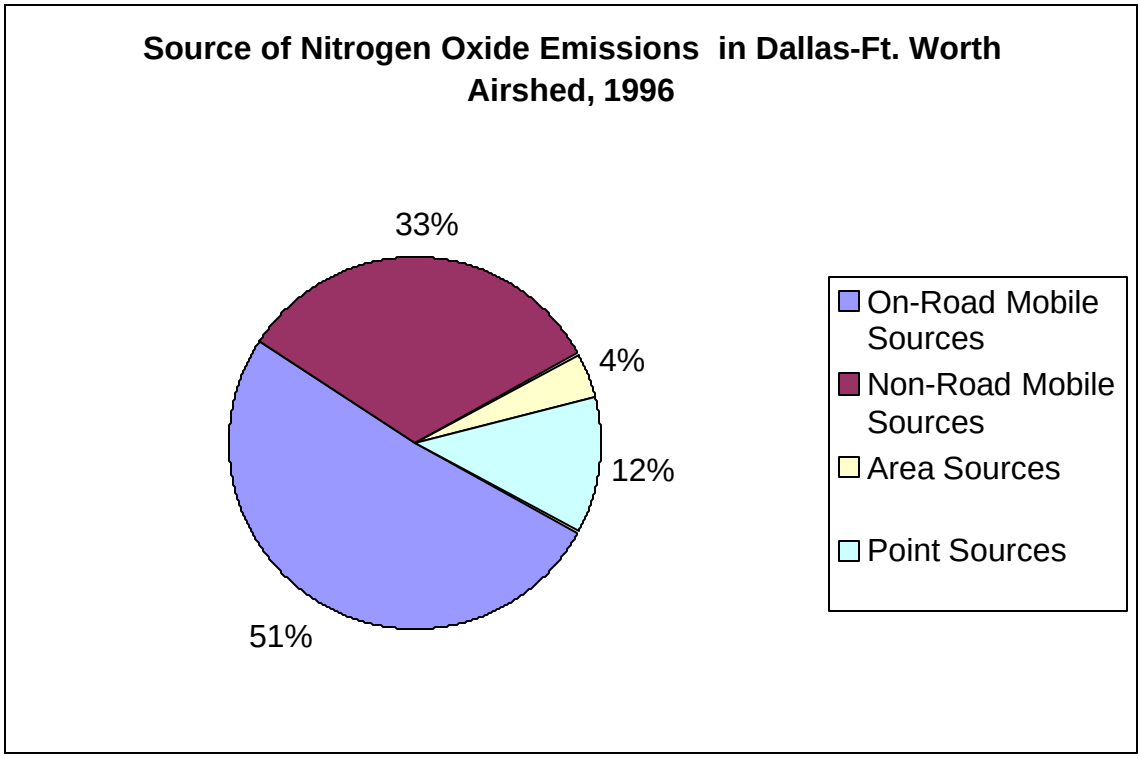
Without significant new controls on diesel emissions, millions of Americans will continue to breathe unhealthy air. The new standards will result in substantial benefits to the public health and welfare through significant annual reductions in emissions of nitrogen oxides, fine particulate matter, hydrocarbons, carbon monoxide, sulfur dioxide, and air toxins. The clean air impact of this program will be dramatic when fully implemented. These emission reductions will prevent 8,300 premature deaths, more than 9,500 hospitalizations, and 1.5 million workdays lost. In order to maintain the timeline for cleaning up Texas' air, we need to fully fund TERP. This temporary 5 cent fee is a viable way to make sure we stay on track and make sure that those benefiting from the

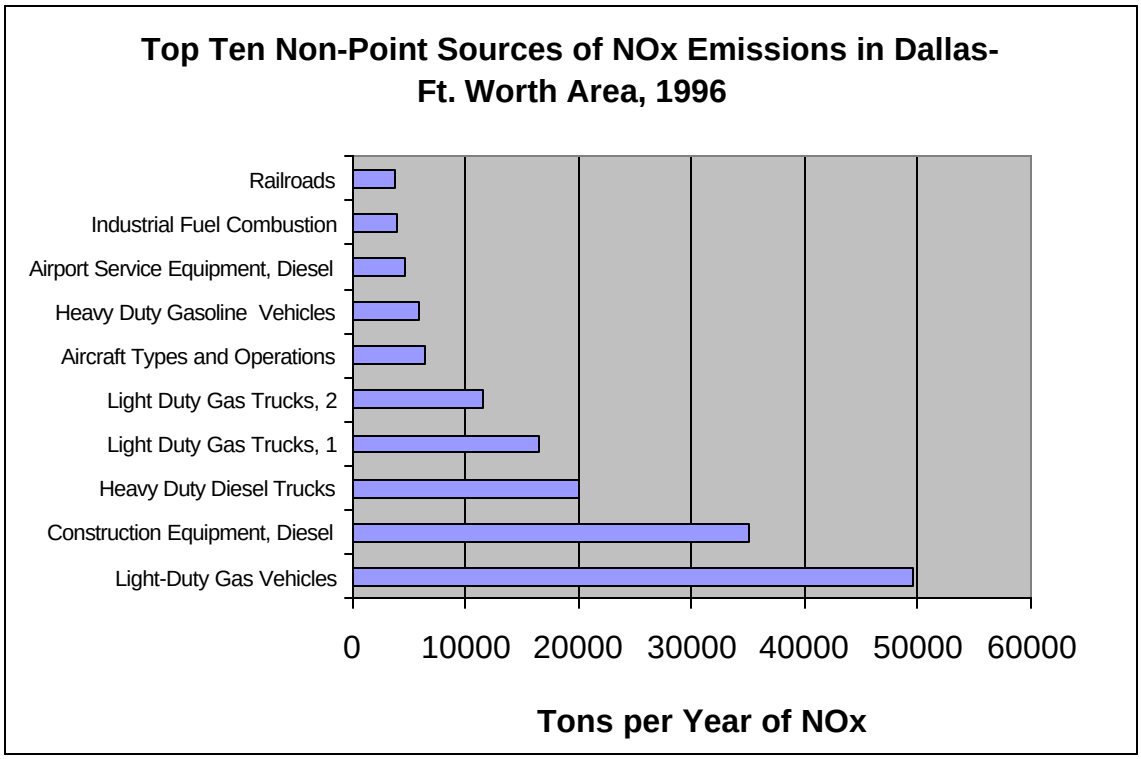
[26] Information from 1999 Central Texas Emissions Inventory, available at http://www.tcet.state.tx.us/PDF/062502ULSD/Wadepercent20Thomason.PDF.
[27] *Dangers of Diesel*, October 2002 report by U.S. PIRG Education Fund: http://www.uspirg.org/reports/dangersofdiesel2002/dangersofdieselreport2002.pdf

funds will be helping to pay for it. The 78th Legislature should consider imposing a 5 cent per gallon on high sulfur diesel fuels to help pay for TERP.









Source for all Graphs: TNRCC, 1996 Emissions Inventory and Non-Point Source Emissions Data, 1996.

VI. Electricity Efficiency Fees

An electricity surcharge tax or fee on either energy consumption or generation could be a way to raise revenues for Texas, while encouraging more efficient use of energy and increased use of renewable resources.

For example, a higher tax rate could be charged to power plants that were burning fuels inefficiently, such as older coal-burning power plants. A lower tax rate would be charged to a power plant burning energy more efficiently or to power plants that don't pollute, such as wind power plants. Any such "efficiency" tax or fee would have to be carefully balanced with the taxes that utilities currently pay in Texas. Currently, power plants pay local property taxes, a state utility tax based upon gross receipts, and local fees for right-of-ways for their lines.

One reason a new electricity tax may be needed is because of the expected loss of local property revenues due to electricity deregulation. In a regulated market, local tax assessors base the property tax on invested capital of a power plant. Because the price and customer base is regulated, the energy producer can set the price to pay back this initial investment. But in a competitive market, the value of the property is affected by the ability of the generator to compete, and the market price may not support the initial capital investment. The tax assessor in most cases will have to reduce the assessed property value. While Texas's electric deregulation bill institutes some new fees to help offset this property loss in the long term, local property districts could face major losses of tax in rural counties where generating stations are located. An electricity tax could be a way to raise money for the state's education system, while giving an incentive to reduce energy consumption and consumption of fossil fuels in particular.

There are a number of different methods to tax energy consumption. One is to simply charge a tax on kilowatt hours, irrespective of how much energy inputs – measured in BTUs – are used to generate that energy. But a better way might be to base the tax on the amount of BTUs used, rather than kilowatt hours.

Another issue in considering an electricity tax is whether to charge the generator or the consumer. If generators are taxed, they may pass the costs on to their customers. And, those costs might go primarily to residential customers, who are less likely to compare the price and may have fewer options to choose their generator, rather than to industrial users.

However, one advantage of having power generators pass the costs of a new tax or fee on to their residential customers is that it would serve as a strong reminder about the larger impacts of their individual energy choices.

Other states have recently adopted new electricity taxes. Ohio, for example, has adopted a new kilowatt-hour tax on electricity and a thousand-cubic-foot tax on natural gas. These new taxes will allow the state to transfer $288 million annually to schools and local governments. The money replaces property tax revenue lost by local governments and schools as a result of the deregulation of gas and electric utilities. Revenue from the new kilowatt and gas taxes also replaces state gross receipts taxes formerly paid by utilities.[28]

Texas should explore a similar energy tax, although we believe a standard sales tax or kilowatt-per-hour tax would put too much of a burden on Texas working families. Instead, we believe we should

[28] Tax Analysts, State Tax Notes, September 3, 2001, p. 693. For the press release see http://www.state.oh.us/tax/News_Releases/news_release_072601.html

explore an efficiency electricity tax, based on either the amount of nitrogen oxide generated per megawatt hours or on BTUs/kilowatt. In this way, electricity would be taxed according to its efficiency (and by extension cleanliness) and would be based on the unit of electricity used and its pollution, not upon the value or price of the electricity. Currently, the Public Utility Commission is exploring a generator dispatch fee paid by the utility based upon NOx emissions rate and the total megawatt hours to fund fuel cell development and clean energy.[29]

An efficiency fee could be charged to Texas utilities to raise monies both for the fuel cell development program as well as funds for the Texas Emissions Reduction Program. The fee could be based on PUC's proposed generator dispatch fee in order to raise sufficient funds for both programs. One proposed fee would charge $0.30 per pound of NOx per megawatt hour multiplied by the total megawatt hours generated by the utility. Based upon generation data from 2000, this efficiency tax would generate about $170 million per year (see **Table 10**), or nearly $350 million over the biennium. In actuality, the proposal would generate slightly more since the estimates do not include smaller cooperatives and municipal sources, as well as cogeneration plants. Alternatively, the tax could be charged directly to the retail consumer, based upon the NOx emissions rate (lbs emitted/MWHs) times the number of megawatt hours utilized by the customer. This would give consumers an incentive to choose power from electric power generators that emit less pollution.

If assessed to utility customers, this new energy efficiency fee would result in only a very minimum additional monthly utility bill. Based on 2003 residential rates for an average use of 1,000 kilowatt hours per month, customers in Texas would pay an average of 65 cents more per month. **Table 11** shows what customers of major utilities in Texas would pay per month based upon this average.

[29] Public Utility Commission of Texas, *Staff White Paper on Stationary Fuel Cells for Power Generation*, May 6, 2002. Under the PUC proposal for fuel cell development, the highest proposed dispatch fee assessment rate for fuel cell development would occur in the years of greatest total program cost. In these high cost years, power plants with a NOx emissions rate of zero would pay between zero and $0.21 cents per megawatt hour, a power plant with a moderately low NOx emissions rate of 2 lb./MWh would pay between $0.31 to $0.37 cents per megawatt hour, and a power plant with a high emissions rate of 3.5 lb/MWh would pay between $0.49 cents and $0.55 cents per megawatt hour. Our proposal is to simplify these rates to $0.30 per pound of NOx per Megawatt hour and apply it beginning in 2004 to generate monies for both the fuel cell development program and the Texas Emissions Reduction Program. See PUC, Table 5, page 13.

Table 10. Net Utility Generation, Nitrogen Oxide Emissions, Nitrogen Oxide Emission Rate and Estimated Electric Efficiency Fee

Utility Name	Total Generation, 1999 (MWHs)	Total Emissions of Nitrogen Oxides (in Tons)	NOx Emissions Rate (Lbs of NOx/MWHs)	Estimated Energy Efficiency Fee ($0.3 per NOx Emissions Rate * MWHs)
American Electric Power	22,166,000	53,764.69	4.85	$32,258,814
Austin Energy	10,149,000	1,793.20	0.35	$1,075,920
Brazos Electric Power Cooperative	1,792,000	995.23	1.11	$597,138
City Public Service	17,377,000	13,108.20	1.51	$7,864,920
Entergy Gulf States	12,375,000	8,659.00	1.40	$5,195,400
El Paso Electric	6,801,000	2,343.70	0.69	$1,406,220
LCRA	11,063,000	22,063.98	3.99	$13,238,388
Reliant Energy	60,486,000	37,233.10	1.23	$22,339,860
Southwestern Public Service	15,578,000	30,726.00	3.94	$18,435,600
Southwestern Electric Power	11,851,000	3,222.00	0.54	$1,933,200
Texas-New Mexico Power	1,913,000	2,521.56	2.64	$1,512,936
TXU	94,575,000	110,696.00	2.34	$66,417,600
Total Texas	**266,126,000**	**287,126.66**	**2.16**	**$172,275,996**

Source for Megawatt Hours: Public Utility of Texas, 2000 Annual Update of Generating Electric Utility Data (Project No. 22209, December 2000), Table 3.

Source for Emissions of NOX: *"FY 2003 Air Emissions Fee Data" provided by TCEQ, November 2002.*

Table 11. Average Monthly Customer Energy Efficiency Add-on

Utility Name	NOx Emissions Rate (Lbs of NOx/MWHs)	Average Customer (1,000 Kilowatts) Monthly Bill, January 2003	Energy Efficiency Add-On Fee	Total Monthly Residential Bill
American Electric Power	4.85	$80.25	$1.46	$81.71
Austin Energy	0.35	$71.59	$0.11	$71.70
Brazos Electric Power Cooperative (1)	1.11	NR	$0.33	
City Public Service	1.51	$71.58	$0.45	$72.03
Entergy Gulf States	1.40	$75.8	$0.42	$76.22
El Paso Electric	0.69	$104.97	$0.21	$105.18
LCRA (1)	3.99	$73.40	$1.20	$75.70
Reliant Energy	1.23	$88.15	$0.37	$88.52
Southwestern Public Service	3.94	$61.69	$1.18	$62.87
Southwestern Electric Power	0.54	$53.61	$0.16	$53.77
Texas-New Mexico Power	2.64	$89.52	$0.79	$90.31
TXU	2.34	$80.77	$0.70	$81.47
Total Texas	**2.16**	$75.87	**$0.65**	$76.52

(1) LCRA and Brazos Electric Power Cooperative are wholesale providers. For LCRA rate, Bluebonnet Electric Cooperative monthly rate was used.

Source for Monthly Rates: Public Utility of Texas, Electric Utility Bill Comparison, January 2003 and Retail Electric Service Bill Comparisons, January 2003.

Source for Emissions of NOx: *"FY 2003 Air Emissions Fee Data" provided by TCEQ, November 2002*.

VII. Conclusions and Recommendations

This paper lays out five possible options to raise state revenues in an environmentally responsible way. Environmental responsibility, however, is just one measure of a fair and adequate tax system. For example, raising the motor fuels tax is environmentally responsible because it directly taxes an activity – driving – that has profound environmental and public health impacts. On the other hand, the motor fuels tax is the most regressive of all taxes in Texas. Any increase in that tax would impact those least able to pay. Consideration of these tax approaches must take into account their impact on different sectors of the population and on different industries.

We believe the five ideas presented here are both viable and politically possible. In particular, raising fees by removing the industrial emissions "volume discount" to fund the state's natural resource agency functions seems like a basic first step to make sure polluting industries pay their fair share.

In addition, the coal industry in Texas should pay its fair share of revenues to the state, just as oil and gas production does. A state coal use tax would raise revenues and ensure fairness among these different energy sources.

A system to make sure the state motor vehicles tax is affected by the fuel efficiency and pollution impacts of particular vehicle models also seems reasonable, particularly since the Texas Emissions Reduction Plan (TERP) already incorporates some fee-bate ideas.

Imposing at least a temporary fee on users of high-sulfur diesel fuel until stricter standards kick in would help make up some of the funding TERP so desperately needs.

Finally, an electricity efficiency fee based in part on the generation of emissions by electricity source could help make up some of the property tax deficit due to electric deregulation. Such a fee would help fund education in Texas and reduce pollution.

This report makes the following recommendations:

- End the volume discount on air emissions by eliminating the 4,000 per pollutant cap and charging industries $18 per ton for FY 2004 and 2005;
- Implement a 7.5 percent coal use tax on all coal and lignite used in Texas;
- Require an added annual registration pollution fee on new motor vehicles depending upon the Bin rating of the car;
- Impose a 5 cents per gallon (or $2.25 per barrel) high-sulfur diesel fee for any diesel fuels sold above 15 ppm sulfur; and
- Levy a megawatt per hour electricity generator dispatch efficiency fee, based on 30 cents per pound of NOx per megawatt hour times the total number of megawatt hours generated.

Together these five measures could raise nearly $1 billion over the biennium (see **Table 12**).

Table 12. Environmentally Responsible Options, Revenues and Proposed Uses

Environmentally Responsible Option	Revenues (2004-2005 Biennium)	Proposed Use of Money
End the volume discount; $18 per ton emissions fee	$6.4 million	Must be dedicated to Title V Clean Air Program
A 7.5 percent coal use tax	$275 million	Could be used for health or education programs
Annual vehicle registration "pollution" fee	$40 million	Could pay for car rebate programs of TERP
A 5 cents per-gallon (or $2.25 per barrel) high-sulfur diesel fee	$300 million	Could be used to fund majority of TERP program
A 30 cents per lb. of NOx/megawatt hour electric generator dispatch fee	$350 million	Could be used for energy efficiency programs, fuel cell development and/or health and education programs
Totals	$971.4 million	Would completely fund TERP, fuel cell development/energy efficiency and provide some monies for health and education programs