

REVISIONS TO THE STATE IMPLEMENTATION PLAN (SIP)
FOR ELECTRIC GENERATING UTILITIES STATEWIDE TO REDUCE
PM_{2.5} TRANSPORT EMISSIONS

CLEAN AIR INTERSTATE RULE
(CAIR)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
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PROJECT NO. 2005-048-SIP-NR

Chapters 101 and 122 - 2005-046-101-EN (CAIR)

Adopted

JULY 12, 2006

SECTION VI. CONTROL STRATEGY

- A. Introduction (No change.)
- B. Ozone (No change.)
- C. Particulate Matter (No change.)
- D. Carbon Monoxide (No change.)
- E. Lead (No change.)
- F. Oxides of Nitrogen (No change.)
- G. Sulfur Dioxide (No change.)
- H. Conformity with the National Ambient Air Quality Standards (No change.)
- I. Site Specific (No change.)
- J. Mobile Source Strategies (No change.)
- K. Clean Air Interstate Rule (Revised)

EXECUTIVE SUMMARY

This revision to the State Implementation Plan (SIP) for particulate matter (PM_{2.5}) transport sets forth how the TCEQ will meet the emissions allowance allocation budgets for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) established in the United States Environmental Protection Agency's (EPA) final rule entitled, **“Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO_x SIP Call”** otherwise known as “CAIR” (40 CFR Parts 51, 72, 73, 74, 77, 78 and 96). This SIP revision will address the TCEQ's obligation for interstate transport of PM_{2.5} under section 110(a)(2)(D) of the Federal Clean Air Act (CAA). To meet the federal obligations under CAIR, the commission is specifying statewide emission reduction requirements for NO_x and SO₂ from electric generating units (EGUs).

On May 12, 2005, CAIR was published in the *Federal Register*. The rule requires 28 eastern states and the District of Columbia to reduce SO₂ and/or NO_x emissions, which are precursors of PM_{2.5} and ozone (O₃). Twenty-three states¹ and the District of Columbia must reduce annual SO₂ and NO_x emissions to attain the PM_{2.5} National Ambient Air Quality Standards (NAAQS). Under CAIR, twenty-five states² and the District of Columbia, not including Texas, must reduce NO_x emissions for the purposes of attainment of the 8-hour ozone NAAQS. States were given the choice to use one of two compliance options from the EPA: 1) meet the state's emission budget by requiring EGUs to participate in an EPA administered interstate cap-and-trade program; or 2) meet an individual state emissions budget through measures of the state's choosing. The 79th Texas Legislature in 2005 passed House Bill 2481³ in its Regular Session requiring the TCEQ to adopt the EPA administered interstate cap-and-trade program by reference and stipulating specifications for NO_x allowance allocations and set-asides for NO_x emissions, as well as only requiring reductions associated with CAIR from new⁴ and existing⁵ EGUs.

The EPA modeled 37 states, including Texas, for PM_{2.5} contribution using the Community Multiscale Air Quality Model (CMAQ). State-by-state zero-out modeling was then used to quantify the state's contribution for SO₂ and NO_x. A criterion of 0.2µg/m³ was used for determining whether SO₂ and NO_x emissions in a state made a significant contribution to PM_{2.5} nonattainment in another state. The EPA's modeling demonstrated that Texas provided a contribution of 0.29µg/m³ with two downwind “linkages.” The two downwind counties identified are Madison and St. Clair in Illinois. For ozone contribution only, 31 states in the eastern United States were modeled. Since Texas was not included in the modeling exercise, the EPA did not determine that Texas contributed to ozone nonattainment in another state.

The control measures identified in the CAIR program to regulate EGUs through an interstate cap-and-trade program have been approved by the EPA as an option under the program. Tables ES-1 and ES-2

¹Alabama, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

²Alabama, Arkansas, Connecticut, Delaware, Florida, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin.

³Act of June 18, 2005, 79th Leg., R.S., HB. 2481, § 2 (codified at Tex. Health & Safety Code §382.0173, concerning Adoption of Rules Regarding Certain SIP Requirements and Standards of Performance for Certain Sources). See Appendix A.

⁴New EGU - Units commencing operation on or after January 1, 2001.

⁵Existing EGU - Units commencing operation before January 1, 2001.

provide an overview of projected emission reductions provided by the EPA⁶ for SO₂ and NO_x, respectively.

Table ES-1: CAIR NO_x Control Measures Reductions within Texas

NO_x Emissions (thousand tons per year)	2003	2009	2015
Texas NO_x Emissions without CAIR	211	186	179
Texas NO_x Emissions with CAIR	N/A	167	159

(The EPA projects that by 2015, CAIR will help Texas sources reduce NO_x by 52,000 tons per year or 25%.)

Table ES-2: CAIR SO₂ Control Measures Reductions within Texas

SO₂ Emissions (thousand tons per year)	2003	2010	2015
Texas SO₂ Emissions without CAIR	578	417	418
Texas SO₂ Emissions with CAIR	N/A	398	352

(The EPA projects that by 2015 CAIR will help Texas sources reduce SO₂ by 226,000 tons per year or 39%.)

CAIR consists of two phases for NO_x and SO₂ reductions with declining allocations. For phase I for NO_x from 2009-2014, the Texas NO_x budget is 181,014 tons per year (tpy). For phase II from 2015 and thereafter, the Texas NO_x budget is 150,845 tpy.

SO₂ budgets are based on the existing Title IV program under the CAA. Title IV is also known as the Acid Rain Program. Allowance allocations with annual state budgets for Phase I (2010-2014) are based on a 50% reduction of SO₂ emissions from all EGUs in the affected state. The initial Texas budget for Phase I is 320,946 tpy. In Phase II (2015 and beyond) emissions are based on a 65% reduction of Title IV allowances allocated to EGUs in the affected state for SO₂. The Texas budget for Phase II is 224,662 tpy. EGUs that are regulated by CAIR and were not regulated by the Acid Rain program will be required to obtain through the trading system the needed SO₂ allowances to comply with their CAIR obligations.

The EPA's model emission trading rule, 40 CFR Part 96, is a market-based system designed to reduce the costs of complying with the new NO_x and SO₂ emission limits. The trading system places a collective cap on both NO_x and SO₂ emissions from EGUs and provides for the trading of allowances similar to Title IV of the Act's SO₂ Allowance Trading Program. Texas EGUs will be allowed to trade NO_x allowance allocations only with other CAIR states⁷ that are participating in the annual NO_x trading program. SO₂ allowance allocations can still be traded within the realm of the Title IV/Acid Rain program as defined under 40 CFR Part 96 AAA. EGUs subject to Acid Rain will be required to meet allowance requirements of that program in addition to CAIR's allowance requirements.

⁶Webpage information on projected emission reductions. Use the EPA's table. <http://www.epa.gov/CAIR/state/tx.html>

⁷Alabama, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

CAIR applies to any EGU that is a stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, since the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 megawatt electrical (MWe) producing electricity for sale. For a unit that qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity and continues to qualify as a cogeneration unit, a cogeneration unit is a CAIR unit that serves at any time a generator with nameplate capacity of more than 25 MWe and supplies in any calendar year more than one-third of the unit's potential electric output capacity or 219,000 megawatt hour (MWh), whichever is greater, to any utility power distribution system for sale. If a unit qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity but subsequently no longer qualifies as a cogeneration unit, the unit shall be subject to CAIR starting on the day the unit first no longer qualifies as a cogeneration unit.

By October 31, 2006, and in accordance with the requirements given in 40 CFR Part 96.141 and incorporated in 30 TAC Chapter 101, Subchapter H, Division 7, the TCEQ will provide the EPA with the initial NO_x allowance allocation balances for 2009-2014 (Phase I of CAIR) to be distributed to the state's existing EGUs. For the 2015 control period of Phase II, Texas will submit to the EPA beginning October 31, 2009, the CAIR NO_x allowance allocations for the control period in the sixth year after the year of the applicable deadline for submission per 40 CFR Part 96.153. However, HB 2481 requires that beginning with the 2016 control period and for each control period beginning every five years thereafter, the baseline heat input for all affected CAIR NO_x units will be updated to reflect the average of the three highest amounts of the unit's adjusted control period heat input during control periods one through five of the previous seven control periods. Therefore, the deadline for submitting CAIR NO_x allowance allocations to EPA will be 14 months in advance of each control period beginning in 2017 and thereafter. This will allow for the completion of the mandated baseline period, as well as provide time for the executive director to determine the updated CAIR NO_x allowance allocations and submit the updated allocations to EPA.

The CAIR NO_x trading budget for each CAIR NO_x unit is based on the specific direction provided under House Bill 2481 of the 79th Texas Legislature 2005 Regular Session. A total amount of CAIR NO_x allowances equal to 9.5% of the CAIR NO_x trading budget for Texas will be set-aside as a special reserve for distribution to new units commencing operation on or after January 1, 2001. The remaining 90.5% of the CAIR NO_x trading budget for Texas will be distributed to units having commenced operation before January 1, 2001, based on a three-year average of the unit's historical heat input adjusted for the type of fuel burned. In performing the fuel adjustment, a unit's historical heat input will be multiplied by the following: 90% for coal-fired, 50% for natural gas-fired, and 30% for all other fossil fuels.

In addition to the CAIR NO_x trading budget for Texas, the CAIR model trading rule provides an additional pool of allowances available for allocation in the 2009 control period to those CAIR NO_x units achieving early NO_x reductions in 2007 and 2008 or whose compliance with the CAIR NO_x reduction requirements for the 2009 control period would create undue risk to the reliability of electricity supply during the year 2009. This pool of NO_x allowances, the compliance supplement pool (CSP), equates to an additional 772 tons for Texas (40 CFR Part 96.143). 30 TAC Chapter 101.508 outlines the requirements for the request by CAIR NO_x sources of allowances from the CSP.

Allocations for NO_x and SO₂ are reflective of the budgets given in the EPA's May 12, 2005, final CAIR rule [40 CFR Part 51.123(e)(2) - Annual NO_x Budgets; and 41 CFR Part 51.124 (e)(2)]. EGUs will have the option to hold, transfer or sell allowance allocations, but at the end of each year's reconciliation period, each EGU must have enough allowances in its compliance accounts to cover emissions during the

control period.

The CAIR rule includes a provision that other units may opt-in to the CAIR cap-and-trade program under 40 CFR Part 96 Subpart II for NO_x or 40 CFR Part 96 Subpart III for SO₂.

Enforcement responsibilities and expectations include requirements for the TCEQ to conduct pretest meetings with EGUs and observe stack testing and quality assurance testing/certification of monitoring systems. The Federal regulations, 40 CFR Part 96 Subpart HH for NO_x and 40 CFR Part 96 Subpart HHH for SO₂, require that the TCEQ review each monitoring system certification application and issue written notice of approval or disapproval of an application within 120 days after receipt of a complete application (initial or recertification). A default approval is enacted if the certification is not issued within 120 days; however, the rule provides for later decertification, if necessary. The TCEQ will also be responsible for handling any monitoring system decertification actions, conducting site inspections and audits, and being the lead on any enforcement actions.

Title V permits will need to be revised to reflect EGU participation in CAIR. Submission of CAIR permit applications are dictated by 40 CFR Part 96.121 for NO_x and 40 CFR Part 96.221 for SO₂. The TCEQ incorporated requirements for revising Title V permits in 30 TAC Chapter 122.

The TCEQ is participating in the EPA-administered interstate cap-and-trade program. Therefore recordkeeping and reporting requirements for EGUs participating in CAIR will be directed and administered by the EPA's Clean Air Markets Divisions.

This SIP revision contains:

- Control measures for EGUs to reduce NO_x and SO₂ emissions to address interstate transport of pollutants under Section 110(a)(2)(D) of the Clean Air Act;
- A multi-state cap-and-trade program for new and existing EGUs for annual NO_x and SO₂ emissions for PM_{2.5} that will be administered by the EPA, which is the control measure for EGUs to reduce NO_x and SO₂ emissions to address interstate transport of pollutants under Section 110(a)(2)(D) of the Clean Air Act;
- Opt-in provisions for other units to participate in the NO_x and/or SO₂ cap-and-trade program;
- Enforcement and monitoring components for EGUs participating in CAIR;
- Recordkeeping and reporting requirements for EGUs participating in CAIR;
- Title V permit requirements for CAIR for NO_x and SO₂; and
- Methodology for allocating CAIR NO_x allowances.

SECTION V: LEGAL AUTHORITY -

A. General

The TCEQ has the legal authority to implement, maintain and enforce the national ambient air quality standards.

The first air pollution control act, known as the Clean Air Act of Texas, was passed by the Texas Legislature in 1965. In 1967, the Clean Air Act of Texas was superseded by a more comprehensive statute, the Texas Clean Air Act (TCAA), found in Article 4477-5, Vernon's Texas Civil Statutes. The Legislature amended the TCAA in 1969, 1971, 1973, 1979, 1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999, 2001, 2003 and 2005. In 1989, the TCAA was codified as Chapter 382 of the Texas Health & Safety Code.

Originally, the TCAA stated that the Texas Air Control Board (TACB) is the state air pollution control agency and is the principal authority in the state on matters relating to the quality of air resources. In 1991, the Legislature abolished the TACB effective September 1, 1993, and its powers, duties, responsibilities and functions were transferred to the Texas Natural Resource Conservation Commission (TNRCC). With the creation of the TNRCC, the authority over air quality is found in both the Texas Water Code and the TCAA. Specifically, the authority of the TNRCC is found in Chapters 5 and 7. Chapter 5, Subchapters A - F, H - J, and L, include the general provisions, organization and general powers and duties of the TNRCC, and the responsibilities and authority of the Executive Director. This Chapter also authorizes the TNRCC to implement action when emergency conditions arise and to conduct hearings. Chapter 7 gives the TNRCC enforcement authority. In 2001, the 77th Texas Legislature continued the existence of the TNRCC until September 1, 2013, and changed the name of the TNRCC to the Texas Commission on Environmental Quality (TCEQ).

The TCAA specifically authorizes the TCEQ to establish the level of quality to be maintained in the state's air and to control the quality of the state's air by preparing and developing a general, comprehensive plan. The TCAA, Subchapters A - D, also authorize the TCEQ to collect information to enable the commission to develop an inventory of emissions; conduct research and investigations; enter property and examine records; prescribe monitoring requirements; institute enforcement proceedings; enter into contracts and execute instruments; formulate rules; issue orders taking into consideration factors bearing upon health, welfare, social and economic factors, and practicability and reasonableness; conduct hearings; establish air quality control regions; encourage cooperation with citizens' groups and other agencies and political subdivisions of the state as well as with industries and the Federal Government; and establish and operate a system of permits for construction or modification of facilities.

Local government authority is found in Subchapter E of the TCAA. Local governments have the same power as the TCEQ to enter property and make inspections. They also may make recommendations to the Commission concerning any action of the TCEQ that affects their territorial jurisdiction, may bring enforcement actions, and may execute cooperative agreements with the TCEQ or other local governments. In addition, a city or town may enact and enforce ordinances for the control and abatement of air pollution not inconsistent with the provisions of the TCAA or the rules or orders of the Commission.

Subchapters F, G, and H of the TCAA authorize the TCEQ to establish low emission vehicle requirements for mass transit authorities, local government fleets, and private fleets; create a mobile emissions reduction credit program; establish vehicle inspection and maintenance programs in certain areas of the state, consistent with the requirements of the federal Clean Air Act; establish gasoline

volatility and low emission diesel standards; and fund and authorize participating counties to implement low-income vehicle repair assistance, retrofit and accelerated vehicle retirement programs.

B. Applicable Law

The following statutes and rules provide necessary authority to adopt and implement the SIP. The rules listed below have previously been submitted as part of the SIP.

Statutes

TEXAS HEALTH & SAFETY CODE, Chapter 382

September 1, 2005

TEXAS WATER CODE

September 1, 2005

All sections of each subchapter are included, unless otherwise noted.

Chapter 5: Texas Natural Resource Conservation Commission

Subchapter A: General Provisions

Subchapter B: Organization of the Texas Natural Resource Conservation Commission

Subchapter C: Texas Natural Resource Conservation Commission

Subchapter D: General Powers and Duties of the Commission

Subchapter E: Administrative Provisions for Commission

Subchapter F: Executive Director (except §§ 5.225, 5.226, 5.227, 5.2275, 5.232, and 5.236)

Subchapter H: Delegation of Hearings

Subchapter I: Judicial Review

Subchapter J: Consolidated Permit Processing

Subchapter L: Emergency and Temporary Orders (§§ 5.514, 5.5145 and 5.515 only)

Chapter 7: Enforcement

Subchapter A: General Provisions (§§ 7.001, 7.002, 7.0025, 7.004, 7.005 only)

Subchapter B: Corrective Action and Injunctive Relief (§ 7.032 only)

Subchapter C: Administrative Penalties

Subchapter E: Criminal Offenses and Penalties: §§ 7.177, 7.179-7.181

Rules

All of the following rules are found in Title 30, Texas Administrative Code, as of the following effective dates:

Chapter 7, Memoranda of Understanding, §§ 7.110 and 7.119

May 2, 2002

Chapter 35, Subchapters A-C, K: Emergency and Temporary Orders and Permits; Temporary Suspension or Amendment of Permit Conditions

December 10, 1998

Chapter 39, Public Notice, §§ 39.201; 39.401; 39.403(a) and (b)(8)-(10); 39.405(f)(1) and (g); 39.409; 39.411 (a), (b)(1)-(6) and (8)-(10) and (c)(1)-(6) and (d); 39.413(9), (11), (12) and (14); 39.418(a) and (b)(3) and (4); 39.419(a), (b),(d) and (e); 39.420(a), (b) and (c)(3) and (4); 39.423 (a) and (b); 39.601; 39.602; 39.603; 39.604; and 39.605

August 15, 2002

Chapter 55, Request for Contested Case Hearings; Public Comment, §§ 55.1; 55.21(a) - (d), (e)(2), (3) and (12), (f) and (g); 55.101(a), (b), (c)(6) - (8); 55.103; 55.150; 55.152(a)(1), (2) and (6) and (b); 55.154; 55.156; 55.200; 55.201(a) - (h); 55.203; 55.205; 55.206; 55.209 and 55.211

August 29, 2002

Chapter 101: General Air Quality Rules	June 23, 2005
Chapter 106: Permits by Rule, Subchapter A	June 30, 2004
Chapter 111: Control of Air Pollution from Visible Emissions and Particulate Matter	November 18, 2004
Chapter 112: Control of Air Pollution from Sulfur Compounds	July 16, 1997
Chapter 113: Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants	June 15, 2005
Chapter 114: Control of Air Pollution from Motor Vehicles	May 19, 2005
Chapter 115: Control of Air Pollution from Volatile Organic Compounds	May 5, 2005
Chapter 116: Permits for New Construction or Modification	June 15, 2005
Chapter 117: Control of Air Pollution from Nitrogen Compounds	May 19, 2005
Chapter 118: Control of Air Pollution Episodes	March 5, 2000
Chapter 122, § 122.122: Potential to Emit	December 11, 2002
Chapter 122, § 122.215: Minor Permit Revisions	June 3, 2001
Chapter 122, § 122.216: Applications for Minor Permit Revisions	June 3, 2001
Chapter 122, § 122.217: Procedures for Minor Permit Revisions	December 11, 2002
Chapter 122, § 122.218: Minor Permit Revision Procedures for Permit Revisions Involving the Use of Economic Incentives, Marketable Permits, and Emissions Trading	June 3, 2001

LIST OF ACRONYMS

ACT - Alternative Control Techniques
AFV - Alternative Fuel Vehicle
AIRS - Aerometric Information Retrieval System
APA - Administrative Procedure Act
ARACT - Alternate Reasonably Available Control Technology
ARPDB - Acid Rain Program Data Base
ASC - Area Source Categories
ASE - Alliance to Save Energy
ASM - Acceleration Simulation Mode (I/M Test)
ATC - Air Traffic Control
BACT - Best Available Control Technology
BEIS-2 - Biogenic Emissions Inventory System, version2
BELD - Biogenic Emissions Land Cover Database
BIOME - Biogenic Model for Emissions
BPA - Beaumont-Port Arthur
CAIR - Clean Air Interstate Rule
Cal LEV - California Low Emission Vehicle
CAM - Compliance Assurance Monitoring
CAMR - Clean Air Mercury Rule
CAMS - Continuous Air Monitoring Station
CAMx - Comprehensive Air Model with Extensions
CARB - California Air Resources Board
CARE - Clean Air Responsibility Enterprise
CB-IV HC - Carbon Bond IV Hydrocarbon
CFR - Code of Federal Regulations
CEMS - Continuous Emissions Monitoring System
CERR - Consolidated Emissions Reporting Rule
CMAQ - Congestion Mitigation and Air Quality
CMSA - Consolidated Metropolitan Statistical Area
CNG - Compressed Natural Gas
CO - Carbon Monoxide
COAST - Coastal Oxidant Assessment for Southeast Texas
CSP - Compliance Supplement Pool
CTG - Control Technique Guidelines
DART - Dallas Area Rapid Transit
DERC - Discreet Emission Reduction Credit
DFW - Dallas-Fort Worth
DFWN - Dallas-Fort Worth North
DFWRTM - Dallas-Fort Worth Regional Travel Model
DOW - Day of Week
DRI - Desert Research Institute
DV - Design Value
EBT - Emissions Banking and Trading
Ecalc - Texas Energy and Emissions Reduction Calculator
EDMS - Emissions and Dispersion Modeling System

EF - Emission Factor
EGAS - Economic Growth Analysis System
EGF - Electric Generating Facilities
EGU - Electric Generating Units
EI - Emissions Inventory
EIQ - Emissions Inventory Questionnaire
ELP - El Paso
EPA - U.S. Environmental Protection Agency
EPN - Emission Point Number
ERC - Emission Reduction Credit
ERCOT - Electric Reliability Council of Texas
ESL - Energy Systems Laboratory
ETR - Employer Trip Reduction
FAA - Federal Aviation Administration
FCAA - Federal Clean Air Act
FMVCP - Federal Motor Vehicle Control Program
FR - Federal Register
FTP - File Transfer Protocol
GIS - Geographic Information System
g/hp-hr - Grams Per Horsepower-Hour
GloBEIS - Global Biosphere Emissions and Interactions System
GSE - Ground Support Equipment
HAP - Hazardous Air Pollutant
HAXL - Houston Air Excellence in Leadership
HB - House Bill
HC - Hydrocarbon
HDD - Heavy-duty Diesel
HDDV - Heavy-duty Diesel Vehicle
HDEWG - Heavy Duty Engine Working Group
HDV - Heavy-duty Vehicle
HGB - Houston-Galveston-Brazoria
H-GAC - Houston-Galveston Area Council
HON - Hazardous Organic NESHAPS
HOV - High Occupancy Vehicle
HP - Horsepower
HPMS - Highway Performance Monitoring System
HRM - Houston Regional Monitoring
IIG - Interim Implementation Guidance
IIP - Interim Implementation Plan
I/M - Inspection and Maintenance
INIT - Initial Condition Tracer
IOP - Increment of Progress
ITWS - Integrated Terminal Weather System
IWW - Industrial Wastewater
KG/HA - Kilograms/hectare
KM - Kilometer
LDT - Light-duty Truck
LED - Low Emission Diesel

LEV - Low Emission Vehicle
LNG - Liquefied Natural Gas
LTO - Landing/Takeoff
m - Meter
MACT - Maximum Achievable Control Technology
MAPPER - Measurement-based Analysis of Preferences in Planned Emissions Reductions
MERC - Mobile Emission Reduction Credit
MIR - Maximum Incremental Reactivity
MMBtu - Million British Thermal Unit
MPA - Metropolitan Planning Area
MWe - Megawatt Electrical
MWh - Megawatt Hour
MY - Model Year
NAAQS - National Ambient Air Quality Standard
NCDC - National Climatic Data Center
NCTCOG - North Central Texas Council of Governments
NEGU - Non-electric Generating Units
NEI - National Emissions Inventory
NESHAPS - National Emission Standards for Hazardous Air Pollutants
NEVES - Nonroad Engine and Vehicle Emission Study
NLEV - National Low Emission Vehicle
NSR - New Source Review
NO_x - Nitrogen Oxides or Oxides of Nitrogen
NO_y - Nitrogen Species
NSR - New Source Review
NTCASC - North Texas Clean Air Steering Committee
NWS - National Weather Service
O₃ - Ozone
OAQPS - Office of Air Quality Planning and Standards
OBD - On-Board Diagnostics
OSAT - Ozone Source Apportionment Technology
OTAG - Ozone Transport Assessment Group
PAMs - Photochemical Assessment Monitoring Sites
PEI - Periodic Emissions Inventory
PM₁₀ - Particulate Matter less than 10 microns
PM_{2.5} - Particulate Matter less than 2.5 microns
ppb - Parts Per Billion
ppm - Parts Per Million
ppmv - Parts Per Million by Volume
PSDB - Point Source Database
PSIA - Pounds per Square Inch Absolute
QA/QC - Quality Assurance/Quality Control
RACT - Reasonably Available Control Technology
RAQPC - Regional Air Quality Planning Committee
RATA - Relative Accuracy Test Audits
RCTSS - Regional Computerized Traffic Signal System
RFG - Reformulated Gasoline
REMI - Regional Economic Modeling, Inc.

ROP - Rate-of-Progress
RSD - Remote Sensing Device
RVP - Reid Vapor Pressure
SB - Senate Bill
SCAQMD - South Coast Air Quality Management District [Los Angeles area]
SCC - Source Classification Code
SCRAM - Support Center for Regulatory Air Models
SETRPC - Southeast Texas Regional Planning Commission
SIC - Standard Industrial Classification
SIP - State Implementation Plan
SO₂ Sulfur Dioxide
SO_x - Sulfur Compounds
SOCMI - Synthetic Organic Chemical Manufacturing Industry
SP - Smog Production algorithm
STARS - State of Texas Air Reporting System
SULEV - Super-Ultra-Low Emission Vehicle
TAC - Texas Administrative Code
TACB - Texas Air Control Board
TAFF - Texas Alternative Fuel Fleet
TCAA - Texas Clean Air Act
TCEQ - Texas Commission on Environmental Quality (commission)
TCF - Texas Clean Fleet
TCM - Transportation Control Measure
TERP - Texas Emissions Reduction Plan
TIP - Transportation Improvement Program
TIPI - Texas Industrial Production Index
TMC - Texas Motorist's Choice
TNMOC - Total nonmethane organic compounds
TNRCC - Texas Natural Resource Conservation Commission
TPOD - Tons Per Ozone Day
TPY - Tons Per Year
TSP - Total Suspended Particulate
TTI - Texas Transportation Institute
UAM - Urban Airshed Model
USDA - United States Department of Agriculture
USGS - United States Geological Survey
UTM - Universal Transverse Mercator
VAVR - Voluntary Accelerated Vehicle Retirement
VERP - Voluntary Emission Reduction Permit
VMAS - Vehicle Mass Analysis System
VMEP - Voluntary Mobile Source Emissions Reduction Program
VMT - Vehicle Miles Traveled
VNR or VNRAT- VOC-NO_x ratios
VOC - Volatile Organic Compound
WOE - Weight of Evidence

CLEAN AIR INTERSTATE RULE (CAIR)

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CHAPTER 1: GENERAL

1.1 BACKGROUND

“The History of the Texas State Implementation Plan (SIP),” a comprehensive overview of the SIP revisions submitted to the EPA by the State of Texas, is available at the following web site:
<http://www.tceq.state.tx.us/implementation/air/sip/siplans.html> .

1.2 INTRODUCTION

This revision to the State Implementation Plan (SIP) for the transport of annual PM_{2.5} sets forth how the TCEQ will meet the emissions budget for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) for electric generating units (EGUs) established in the United States Environmental Protection Agency’s (EPA) final rule entitled “**Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO_x SIP Call**” otherwise known as “CAIR.”

This federal rulemaking sets annual NO_x and SO₂ emissions budgets for Texas electric generating units (EGUs). CAIR is a two phase program. Texas has a NO_x budget of 181,014 tons per year (tpy) for Phase I, 2009-2014, and 150,845 tpy for Phase II, 2015 and thereafter. The SO₂ budgets are based on Title IV allocations. Title IV is also known as the Acid Rain program. Annual SO₂ state budgets for the years 2010-2014, Phase I, are based on a 50% reduction from Title IV for all units in the affected state. The Texas SO₂ budget for Phase I is 320,946 tpy. Phase II budgets, in 2015 and beyond, are based on a 65% reduction of Title IV allowances allocated to units in the affected state for SO₂ controls. The Texas SO₂ budget for Phase II is 224,662 tpy. Texas will meet this budget through the CAIR interstate trading program established under 40 CFR Part 51.123(e)(2), as incorporated in 30 TAC Chapter 101, Subchapter H. The Texas annual budgets for NO_x and SO₂ are noted in Table 1-1, *Texas CAIR Emissions Budgets in Tons Per Year*.

Table 1-1: Texas CAIR Emissions Budgets in Tons Per Year

Pollutant	Phase I ⁸ Budget	Phase II ⁹ Budget
NO _x	181,014	150,845
SO ₂	320,946	224,662

The objective of CAIR is to reduce the effects of transport of ozone and PM_{2.5} and their precursors. Ozone is the major component of smog and is formed in the atmosphere by the photochemical reaction of NO_x and reactive hydrocarbons (volatile organic compounds or VOCs) in the presence of high temperatures and ultraviolet light.

Recognizing the potential health and welfare impacts of ozone and PM_{2.5}, the EPA established CAIR in the eastern portion of the United States, including Texas. Twenty-eight states and Washington D.C. are required to implement the two-phase CAIR rule. EPA determined 23 states, including Texas, contribute to NO_x and SO₂ emissions that affect PM_{2.5} levels in downwind states, and 23 states and Washington D.C.

⁸Phase I for NO_x 2009-2014; Phase I for SO₂ 2010-2014.

⁹Phase II for NO_x 2015 - thereafter; Phase II SO₂ 2015 - thereafter.

contribute to unhealthy levels of 8-hour ozone in downwind states. Texas is only considered to significantly contribute to PM_{2.5} pollution in two Illinois counties: Madison and St. Clair.

CAIR applies to any EGU that is a stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, since the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 megawatt electrical (MWe) producing electricity for sale. For a unit that qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity and continues to qualify as a cogeneration unit, a cogeneration unit is a CAIR unit that serves at any time a generator with nameplate capacity of more than 25 MWe and supplies in any calendar year more than one-third of the unit's potential electric output capacity or 219,000 megawatt hours (MWh), whichever is greater, to any utility power distribution system for sale. If a unit qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity but subsequently no longer qualifies as a cogeneration unit, the unit shall be subject to CAIR starting on the day that the unit first no longer qualifies as a cogeneration unit.

The EPA's model emission trading rules, 40 CFR Part 96 Subpart AA for NO_x and 40 CFR Part 96 Subpart AAA for SO₂, are a market-based system designed to reduce the cost of complying with the NO_x and SO₂ emission limits. This trading system places a collective cap both on NO_x and SO₂ emissions from EGUs and provides for the trading of allowances similar to the Title IV of the Act's SO₂ Allowance Trading Program. The model emission trading rules to implement CAIR requirements in Texas are adopted in accordance with the requirements of HB 2481. The 79th Texas Legislature in the 2005 Regular Session passed HB 2481, which requires the commission to adopt the EPA administered interstate cap-and-trade program by reference, but directs the commission to use the NO_x allowance methodology specified in the bill.

For NO_x allocations, 9.5% of the initial NO_x budget will be set-aside for new units. New units, in operation on or after January 1, 2001, will only be allowed to receive allocations from this set-aside. In 2016, new units will be reevaluated and if they do not have five years of operating data prior to the allocation date then they will still be considered new. However, if there are five years of operating data, the new EGU will be reclassified as an existing unit.

For existing units, those in operation prior to January 1, 2001, allowances will be calculated using the average of the three highest amounts of the unit's adjusted control period heat input for 2000-2004 with the adjusted control period calculations as follows: for coal fired units, the unit's control period heat input for such years is multiplied by 90%; for natural gas fired units, the unit's control period heat input for such years is multiplied by 50%; and for other fossil fuel type units, the unit's control period heat input for such years is multiplied by 30%.

CAIR established a NO_x compliance supplement pool (CSP) for the annual NO_x program sources that contribute to PM_{2.5} pollution in the CAIR program area. Texas has been given a CSP of 772 tons of NO_x for EGUs that make any early reductions in 2007 and 2008 or that demonstrate a need for additional allowances to ensure reliability of electric supply. The executive director will determine the distribution of the CSP.

The appendices are not included with this document. They are available on the TCEQ website at: <http://www.tceq.state.tx.us/implementation/air/sip/sipplans.html> or can be requested by contacting the TCEQ at:

Texas Commission on Environmental Quality
Air Quality Planning and Implementation Division
P. O. Box 13087
Mail Code 206
Austin, Texas 78711-3087
Re: CAIR SIP Information

Current Revision

On May 12, 2005, the EPA promulgated CAIR thru revisions to 40 CFR Parts 51, 72, 73, 74, 77, 78 and 96. The EPA provided two options for CAIR affected states to be in compliance:

- A) Meet the state's emission budget by requiring EGUs to participate in an EPA-administered interstate cap-and-trade system that caps emissions in two stages; or
- B) Meet an individual state emissions budget through measures of the state's choosing.

The 2005 79th Texas Legislature Regular Session passed House Bill 2481 requiring the commission to adopt portions of the CAIR rule by reference and stipulating specifications for allowances and set-asides for NO_x emissions. Therefore, the TCEQ must participate in the EPA-administered interstate cap-and-trade program.

This SIP revision contains information to meet option A, which fulfills the requirements of the 2005 79th Texas Legislature Regular Session. The legislature provided the TCEQ the allocation methodology for the allocation of NO_x allowances and direction to adopt CAIR by reference.

This revision contains several elements:

- Control measures for EGUs to reduce NO_x and SO₂ emissions to address interstate transport of pollutants under 110(a)(2)(D) of the Clean Air Act;
- A multi-state cap-and-trade program for new and existing EGUs for annual NO_x and SO₂ emissions for PM_{2.5} that will be administered by the EPA, which is the control measure for EGUs to reduce NO_x and SO₂ emissions to address interstate transport of pollutants under Part 110(a)(2)(D) of the Federal Clean Air Act;
- Opt-in provisions for other units to participate in the NO_x and/or SO₂ cap-and-trade program;
- Enforcement and monitoring components for EGUs participating in CAIR;
- Recordkeeping and reporting requirements for EGUs participating in CAIR;
- Title V permit requirements for CAIR for NO_x and SO₂; and
- Methodology for allocating CAIR NO_x allowances.

1.3 HEALTH EFFECTS

Exposure to PM_{2.5} can cause acute and/or chronic health effects. Acute symptoms can include: lung irritation, coughing, wheezing, and difficulty taking deep breaths. Inflammation of the lungs can cause decreased lung function and aggravate existing respiratory diseases (e.g. asthma, bronchitis, etc.).

Chronic exposure to some types of PM_{2.5}, such as diesel exhaust, may result in an increased risk of respiratory cancers such as lung cancer. By the year 2015, the EPA has predicted that CAIR will result in \$85 to \$100 billion in annual health benefits, preventing 17,000 premature deaths annually, millions of lost work and school days, and tens of thousands of non-fatal heart attacks and hospital admissions¹⁰. The EPA has provided information in the CAIR preamble¹¹ outlining the benefits of PM_{2.5} emission reductions through the CAIR program.

1.4 PUBLIC HEARING INFORMATION

The commission held public hearings at the following times and locations:

CITY	DATE	TIME	LOCATION
Austin	April 11, 2006	2:00 p.m.	Texas Commission on Environmental Quality 12100 North I-35 Building E, Room 201S
Fort Worth	April 12, 2006	2:00 p.m.	Texas Commission on Environmental Quality 2309 Gravel Drive
Houston	April 13, 2006	2:00 p.m.	Texas Commission on Environmental Quality 5425 Polk Street Suite H, 3 rd Floor

The comment period ended on April 17, 2006, at 5:00 p.m. Response to those comments can be found in Appendix D.

Copies of the adopted SIP revision and all appendices can be obtained from the TCEQ's web site at <http://www.tceq.state.tx.us/implementation/air/sip/siplans.html> or upon request to:

Texas Commission on Environmental Quality
Air Quality Planning and Implementation Division
P. O. Box 13087
Mail Code 206
Austin, Texas 78711-3087
Re: CAIR SIP Information

1.5 SOCIAL AND ECONOMIC CONSIDERATIONS

For a detailed explanation of the social and economic issues involved with any of the measures, please refer to the preambles that precede each adopted rule package accompanying this SIP and to the CAIR rule as proposed and promulgated by the EPA.

1.6 FISCAL AND MANPOWER RESOURCES

The TCEQ has determined that its fiscal and manpower resources are adequate and will not be adversely

¹⁰Web page information: EPA: Clean Air Interstate Rule - Basic Information <http://www.epa.gov/CAIR/basic.html>

¹¹ Section X - Statutory and Executive Order Reviews (c) Human Health Benefit Analysis

affected through the implementation of this plan. Specific information regarding the TCEQ budget is available upon request.

1.7 COORDINATION WITH LOCAL AGENCIES

The TCEQ has determined that there will be no assignment to local agencies under 40 CFR Part 51.232 to carry out allocations under the NO_x or SO₂ trading programs. However, pre-existing assignments to local agencies regarding various enforcement activities remain in effect and could be utilized if enforcement activities are delegated to the TCEQ from the EPA.

1.8 ORGANIZATIONS RESPONSIBLE FOR DEVELOPMENT, IMPLEMENTATION AND ENFORCEMENT

The TCEQ is the agency delegated authority by the Texas Legislature regarding the protection of air quality in the State of Texas. Other local government entities also have limited authority regarding air quality matters in the State of Texas.

1.9 DATA AVAILABILITY

The TCEQ affirms that it will retain all data used in the preparation of this SIP revision. All supporting documentation and data are available from the TCEQ upon request or are publicly available via the TCEQ website at <http://www.tceq.state.tx.us/implementation/air/sip/siplans.html>, subject to confidentiality restrictions, if applicable.

CHAPTER 2: EMISSIONS INVENTORY

2.1 BACKGROUND

The Consolidated Emissions Reporting Rule (67 FR 39602, June 10, 2002) requires states to submit emissions inventories (EIs) containing information regarding the emissions of criteria pollutants and their precursors [e.g., volatile organic compounds (VOC)]. EIs are critical for the efforts of state, local, and federal agencies to attain and maintain the National Ambient Air Quality Standards (NAAQS) which the EPA has established for criteria pollutants such as ozone, particulate matter, and carbon monoxide.

For areas that have failed to meet these federal air standards or are at risk of doing so, attainment of the NAAQS can be significantly impacted by interstate transport of pollutants. To address transport issues regarding ozone and fine particulate matter (PM_{2.5}), the EPA has promulgated CAIR. CAIR requires states that contribute significantly to nonattainment of the NAAQS for ozone and PM_{2.5} in downwind states to include control measures to reduce nitrogen oxides (NO_x) and sulfur dioxide emissions (SO₂) in their SIPs.

For transport SIP revisions, the upwind states must also submit SO₂ and NO_x emissions data per 40 CFR Part 51.125. As one of the upwind states specified by the EPA, Texas, through the TCEQ, is required to submit annual emissions data for all SO₂ and NO_x sources for which control measures were specified in its transport SIP revisions. Additionally, per 40 CFR Part 51.125, the TCEQ must submit periodic emissions data every third year from all SO₂ and NO_x emissions sources in the state.

In order to comply with the CAIR reporting requirements, the commission will continue to submit to the EPA both an annual EI of all point sources within Texas, as well as a periodic emissions inventory (PEI), which will be submitted every three years. Generally, these EIs include source types present in an area, the amount of each pollutant emitted, and the types of processes and control devices employed at each plant or source category. To ensure triennial reporting of all SO₂ and NO_x emissions sources in the state, the PEI will include criteria pollutant emissions estimates from the five general categories of emissions sources described in this chapter. These categories will encompass the following emissions sources.

- Point sources will include, at a minimum, SO₂ and NO_x emissions from all stationary sources (including EGUs) that meet the definition of major source as defined in 40 CFR Part 70.2.
- Area sources will include SO₂ and NO_x emissions from minor fuel combustion sources.
- Onroad mobile sources will include SO₂ and NO_x emissions from motor vehicle sources.
- Nonroad mobile sources will include, but not be limited to, SO₂ and NO_x emissions from a wide range of mass transportation, marine transportation, and construction equipment.
- Biogenic sources will include NO_x emissions from soils.

EIs provide data for a variety of air quality planning tasks, including establishing baseline emission levels, calculating reduction targets, control strategy development for achieving the required emission reductions, emission inputs into air quality simulation models, and tracking actual emission reductions against the established emissions growth and control budgets.

2.2 POINT SOURCES

The commission requires EIs from accounts that meet any one of the reporting requirements outlined in 30 TAC §101.10, Emissions Inventory Reporting Requirements. Per 30 TAC §101.10, any account (site) located in an ozone nonattainment area that emits a minimum of 10 tpy of VOC or 25 tpy of NO_x must submit an EI to the commission. Furthermore, 30 TAC §101.10 also mandates that any account meeting the definition of a major facility/stationary source as outlined in 30 TAC §116.12 must submit an EI. The definition of major source can vary depending upon the attainment status of the area where the account is

located and the specific pollutant.

Under 30 TAC §101.10, any stationary source that emits or has the potential to emit a minimum of 100 tpy of any criteria pollutant likewise must submit an EI, regardless of the attainment status of the area where the account is located. Additionally, any account in the state that generates or has the potential to generate at least 10 tpy of any single hazardous air pollutant (HAP) or 25 tpy of aggregate HAPs is also required to submit an EI to the commission.

To collect emissions and industrial process operating data, emissions inventory questionnaires (EIQs) are mailed to all accounts in the state identified as having met any one of the reporting requirements of 30 TAC §101.10. Accounts are required to report not only emissions data for all emissions-generating units and emission points, but also the amount of materials used in emissions-generating processes for a representative sample of sources. The EIQ also collects information on process equipment descriptions, operation schedules, emissions control devices currently in use, abatement device control efficiency, and stack parameters such as location, height, and exhaust gas flow rate. All data submitted via the EIQ are then subjected to quality assurance procedures and entered into the State of Texas Air Reporting System (STARS). At the end of the annual reporting cycle, point source emissions data are reported each year to the EPA for inclusion in the National Emissions Inventory (NEI). 40 CFR Part 51.20 only requires annual reporting of Type A (reference 40 CFR Part 51 Appendix A) point sources; however, the commission includes emissions from all point sources that meet the reporting requirements of 30 TAC §101.10 in its annual submission to the EPA.

40 CFR Part 51.20(c)(2) allows states to establish lower emissions reporting thresholds for point sources than those specified in 40 CFR Part 51.20. 30 TAC §101.10 effectively establishes lower actual emissions reporting thresholds for NO_x than 40 CFR Part 51.20 by requiring all accounts located in **any** ozone nonattainment area that emit 25 tpy of NO_x to submit an annual emissions inventory. If the commission's EI reporting requirements correspond to the major source thresholds as defined in 40 CFR Part 70.2, sources emitting 25 tpy of NO_x that were located in marginal, moderate, or serious ozone nonattainment areas possibly would not be required to submit annual emissions inventories due to higher potential emissions reporting thresholds.

Similarly, the actual and potential emissions reporting thresholds in 30 TAC §101.10 for all other criteria pollutants meet or are more stringent than major source emissions thresholds. Therefore, with regard to CAIR, all sources whose annual emissions are required to be reported to the EPA under 40 CFR Part 51.125 are expected to meet the reporting requirements of 30 TAC §101.10 and submit annual EIs; these sources' emissions would therefore be included in the point source emissions inventory annually submitted to the EPA. However, if sources whose annual emissions are required to be reported to the EPA under 40 CFR Part 51.125 fall below the actual or potential emissions reporting thresholds in 30 TAC §101.10, the commission will conduct a special inventory of these sources as authorized by 30 TAC §101.10 (b)(3) to ensure annual reporting of these sources' emissions.

2.3 AREA SOURCES

To capture information about emissions sources that fall below the point source reporting levels and are too numerous or too small to identify individually, emissions from these "area" sources are estimated on a source category or group basis. Area sources include commercial, small-scale industrial, and residential categories of sources that use materials or operate processes that can generate emissions. Area sources can be divided into two groups characterized by the emission mechanism: hydrocarbon evaporative emissions or fuel combustion emissions. Examples of sources of evaporative losses include printing, industrial coatings, degreasing solvents, house paints, leaking underground storage tanks, gasoline service

station underground tank filling, and vehicle refueling operations. Fuel combustion sources include stationary source fossil fuel combustion at residences and businesses, as well as outdoor burning, structural fires, and wildfires. These emissions, with some exceptions, may be calculated by multiplication of an EPA established emission factor (emissions per unit of activity) times the appropriate activity or activity surrogate responsible for generating emissions. Population is the most commonly used activity surrogate for many area source categories while other activity data include amount of gasoline sold in an area, employment by industry type, and acres of crop land.

2.4 NONROAD MOBILE SOURCES

The nonroad mobile source category includes aircraft operations, railroad locomotives, and a very broad range of nonroad equipment that includes 600-horsepower engines mounted on construction equipment to 1-horsepower string trimmers. Calculation methods for emissions from nonroad engine sources are based on information about equipment population, engine horsepower, load factor, emission factor, and annual usage. The EPA's NONROAD model is used to calculate emissions from all nonroad mobile categories except aircraft, airport ground support equipment, and locomotives. The Emissions and Dispersion Modeling System (EDMS) model is used to calculate aircraft emissions. Emissions data from airport ground support equipment and locomotives were developed by consultants conducting surveys of equipment populations and usage as well as collecting other relevant activity data associated with these categories.

2.5 ONROAD MOBILE SOURCES

Onroad mobile sources consist of automobiles, trucks, motorcycles, and other motor vehicles traveling on public roadways. Combustion-related emissions are estimated for vehicle engine exhaust, and evaporative hydrocarbon emissions are estimated for the fuel tank and other evaporative leak sources on the vehicle. Emission factors have been developed using the newest version of the EPA's mobile emissions factor model, MOBILE6.2. Various inputs are provided to the model to simulate the vehicle fleet driving in each particular nonattainment area. Inputs include such parameters as vehicle speeds by roadway type, vehicle registration by vehicle type and age, percentage of vehicles in cold start mode, percentage of miles traveled by vehicle type, type of inspection and maintenance (I/M) program in place, and gasoline vapor pressure. All of these inputs have an impact on the emission factor calculated by the MOBILE6.2 model, and every effort is made to input parameters reflecting local conditions. To complete the emissions estimate, the emission factors calculated by the MOBILE6.2 model must then be multiplied by the vehicle miles traveled (VMT). The level of vehicle travel activity is developed from travel demand models run by the Texas Transportation Institute (TTI), Texas Department of Transportation (TxDOT), or regional Metropolitan Planning Organizations (MPOs). The travel demand models have been validated against a large number of ground counts of traffic passing over counters placed in various locations throughout the State. Estimates of VMT are often calibrated to outputs from the federal Highway Performance Monitor System, which is a model built from a smaller number of traffic counters. Finally, roadway speeds, which are required for the MOBILE6.2 model's input, are calculated by a post-processor to the travel demand model.

2.6 BIOGENIC SOURCES

Biogenic sources are another subset of area sources that includes hydrocarbon emissions from crops, lawn grass, and forests, as well as a small amount of NO_x emissions from soils. Plants are sources of VOCs such as isoprene, monoterpene, and alpha-pinene. Tools such as satellite imaging for mapping of vegetative types, field biomass surveys, and computer modeling of emissions estimates based on emission factors by plant species (PCBEIS-2) are used to provide the best estimates possible. Biogenic emissions are important in determining the overall emissions profile of an area and therefore are required for regional air quality dispersion modeling.

CHAPTER 3: PHOTOCHEMICAL MODELING

The TCEQ is not providing any modeling in support of this CAIR SIP. The EPA conducted air quality modeling using the CMAQ model in conjunction with 2001 meteorological data for simulating PM_{2.5} concentrations and associated visibility effects as well as using the CAMx model with meteorological data for three episodes in 1995 to simulate 8-hour ozone concentrations. The CAIR air quality modeling information, modeling analysis techniques, model evaluation, and results for the PM_{2.5} and 8-hour ozone modeling are available in the EPA docket for the CAIR, Docket ID No. OAR-2003-0053.

Since HB 2481 requires that the TCEQ adopt and implement the EPA model cap-and-trade program, and States have no authority to adjust the NO_x and SO₂ emission budgets under the CAIR, no additional modeling is necessary to implement CAIR in Texas.

CHAPTER 4: DATA ANALYSIS

The TCEQ is not providing specific data analysis in support of this CAIR SIP. The EPA conducted air quality modeling using the CMAQ model in conjunction with 2001 meteorological data for simulating PM_{2.5} concentrations and associated visibility effects as well as using the CAMx model with meteorological data for three episodes in 1995 for simulating 8-hour ozone concentrations. The CAIR air quality modeling information, modeling analysis techniques, model evaluation, and results for the PM_{2.5} and 8-hour ozone modeling are available in the EPA docket for the CAIR, Docket ID No. OAR-2003-0053.

Since HB 2481 requires that the TCEQ adopt and implement the EPA model cap-and-trade program, and States have no authority to adjust the NO_x and SO₂ emission budgets under the CAIR, no additional data analysis is necessary to implement CAIR in Texas.

CHAPTER 5: REQUIRED CONTROL STRATEGY ELEMENTS

5.1 BACKGROUND

The 2005 79th Texas Legislature Regular Session passed House Bill (HB) 2481 that requires the commission to adopt portions of the CAIR rule by reference and stipulates specifications for allowances and set-asides for NO_x emissions. Therefore, the TCEQ must participate in the EPA administered interstate cap-and-trade-program.

5.2 CONTROL STRATEGY - CAIR NO_x and SO₂ RULE CHANGES

Since the TCEQ has elected to impose control measures on EGUs, the commission must impose an annual NO_x mass emissions cap on all EGU sources in the state. As directed by HB 2481, the commission is, under Subchapter H, Division 7 of Chapter 101, incorporating 40 CFR Part 96, Subpart AA through Subpart II for NO_x and Subpart AAA through Subpart III for SO₂ by reference for the purpose of complying with CAIR.

In addition, the commission is specifying rules under 30 TAC Chapter 101, Subchapter H, Division 7 regarding the methodologies and procedures for determining each CAIR NO_x source's CAIR NO_x allowance allocation in lieu of the CAIR NO_x allowance allocation methodologies and procedures under 40 CFR Part 96, Subpart EE. The rules apply to EGUs that are defined as a stationary, fossil-fuel-fired boiler or a stationary, fossil-fuel-fired combustion turbine serving at any time, since the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 MWe producing electricity for sale. The rules also apply to cogeneration units serving at any time a generator with nameplate capacity of more than 25 MWe and supplying in any calendar year more than one-third of the unit's potential electric output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale.

5.2.1 Interstate Cap-and-Trade Program for NO_x and SO₂

The EPA's CAIR model trading rule, 40 CFR Part 96, is a market-based cap-and-trade system designed to reduce the costs of complying with the new NO_x and SO₂ reduction requirements. The CAIR model rule designates respective budgets for annual NO_x and SO₂ emissions within each state to be applied to all fossil fuel-fired boilers and turbines serving an electrical generator with a nameplate capacity greater than 25 megawatts of electricity (MWe) and producing electricity for sale. The model rule provides flexibility in complying with the NO_x and SO₂ reduction requirements through unrestricted banking of excess allowances and the trading of allowances between EGUs in affected CAIR states under common caps. For example, EGUs in Texas will be allowed to trade NO_x allowances with other CAIR states participating in the CAIR annual NO_x trading program, while the trading of SO₂ allowances will be permissible with CAIR states participating in the CAIR SO₂ trading program or the Title IV SO₂ allowance trading program. Under the model rule, states are provided flexibility in the allocation methodology used to determine CAIR NO_x allowance allocations for each CAIR NO_x unit. CAIR states are then responsible for submitting the CAIR NO_x allowance allocations to the EPA for recordation.

5.2.2 CAIR NO_x Annual Trading Budget

30 TAC §101.503 specifies that the NO_x trading budget for annual allocations of CAIR NO_x allowances for each control period in 2009 through 2014, and for 2015 and thereafter, will be equivalent to the tpy of NO_x emissions listed for Texas in the state trading budget under 40 CFR Part 96.140. As promulgated on May 12, 2005, 40 CFR Part 96.140 provides Texas with an annual NO_x trading budget of 181,014 tpy for each control period in 2009 through 2014, and 150,845 tpy for each control period in 2015 and thereafter.

5.2.3 CAIR NO_x Allocation Methodology

The methodology described in 30 TAC §101.506 is used to allocate CAIR NO_x allowances for each CAIR NO_x unit subject to this division. For units commencing operation before January 1, 2001, CAIR NO_x allowances will be allocated based on a three year average historical heat input, in million British thermal units (MMBtu), adjusted for the type of fuel burned. For each control period in 2009 through 2015, the baseline heat input for units commencing operation before January 1, 2001, will be the average of the three highest amounts of the unit's historical heat input, adjusted for fuel type, from calendar years 2000 through 2004. Beginning with the 2016 control period and for the control period beginning every five years thereafter, the baseline heat input for units commencing operation prior to January 1, 2001, will be adjusted to reflect the average of the three highest amounts of the unit's control period heat input, adjusted for fuel type, from control periods one through five of the previous seven control periods. The fuel type adjustment will be performed by multiplying a unit's baseline heat input by the following: 90% for coal-fired, 50% for natural gas-fired, and 30% for all other fossil fuels.

For units commencing operation on or after January 1, 2001, CAIR NO_x allowances will be allocated for each control period in 2009 through 2014 from the 9.5% NO_x new unit set-aside identified under 30 TAC §101.503(b) and as prescribed by the Texas Legislature in HB 2481. Beginning with the 2015 control period, units commencing operation on or after January 1, 2001, and operating each calendar year for a period of five or more consecutive years will no longer be eligible for an allocation from the new unit set-aside and will receive their CAIR NO_x allowance allocation from the general NO_x trading budget on a modified output basis. The baseline heat input will be the average of the three highest amounts of the unit's total converted control period heat input from the first five years of operation. Beginning with the 2016 control period and for the control period beginning every five years thereafter, the baseline heat input will be adjusted to reflect the average of the three highest amounts of the unit's total converted control period heat input from control periods one through five of the previous seven control periods. In calculating a unit's converted control period heat input on a modified output basis, the unit's gross electrical output will be multiplied by a heat rate conversion factor of 7,900 Btu/kWh for coal-fired units and 6,675 Btu/kWh for natural gas- and oil-fired units. For cogeneration units, the converted heat input will be calculated by converting the available thermal output, in British thermal units, of useable steam to an equivalent heat input by dividing the thermal output by a general boiler/heat exchanger efficiency of 80%. For combustion turbine cogeneration units, the converted heat input will be calculated by first converting the available thermal output of useable steam from the heat recovery steam generator or heat exchanger to an equivalent heat input by dividing the thermal output by a general boiler/heat exchanger efficiency of 80%. Then the electrical generation from the combustion turbine must be added after conversion to an equivalent heat input by multiplying the electrical output by 3,413 Btu/kWh. The sum will yield the total equivalent heat input for the combustion turbine cogeneration unit.

The allocation methodology prescribed in HB 2481 distributes 90.5% of the Texas NO_x trading budget to each CAIR NO_x unit with a baseline heat input determined under 30 TAC §§101.506(a), (b)(2), or (b)(3) in proportion to each CAIR NO_x unit's share of baseline heat input to the total baseline heat input for all CAIR NO_x units with a baseline heat input determined under 30 TAC §§ 101.506(a), (b)(2), or (b)(3). For units that commence operation on or after January 1, 2001, and that have not established a historical baseline heat input in accordance with 30 TAC §§101.506(b)(2) or (b)(3), CAIR NO_x allowances are allocated from the new unit set-aside beginning with the later of the 2009 control period or the first control period after the control period in which the new unit commences commercial operation. The allocation methodology requires the executive director to distribute CAIR NO_x allowances from the new unit set-aside upon receipt of a request from the CAIR designated representative for the CAIR NO_x unit. Submittal of each request for a CAIR NO_x allowance allocation from the new unit set-aside will be required on or before July 1 of the first control period for which the request is being made and after the

date on which the CAIR NO_x unit commences commercial operation. CAIR NO_x allowances requested from the new unit set-aside will not be allocated in excess of the new unit's total tpy of NO_x emissions reported to the EPA for the previous control period. On or after July 1 of each control period, the executive director will review each CAIR NO_x allowance allocation request, determine the sum of all CAIR NO_x allowance allocation requests, and allocate CAIR NO_x allowances from the new unit set-aside for the control period. If the amount of CAIR NO_x allowances in the new unit set-aside is greater than or equal to the sum of all CAIR NO_x allowances requested, then the executive director will allocate the amount of CAIR NO_x allowances requested. If the amount of CAIR NO_x allowances in the new unit set-aside is less than the sum of all CAIR NO_x allowances requested, then the executive director will allocate to each new CAIR NO_x unit an amount of CAIR NO_x allowances in proportion to the amount of CAIR NO_x allowances requested by a CAIR NO_x unit to the total amount of CAIR NO_x allowances requested by all CAIR NO_x units. The allocation methodology will allow new units to begin receiving allowances from the set-aside for the control period immediately following the control period in which the new unit commences commercial operation based on the unit's emissions reported for the previous control period. Therefore, a CAIR NO_x source operating a new unit will be required to hold allowances covering the emissions from the new unit for the control period in which the new unit commences commercial operation but will not receive an allocation for that control period. CAIR NO_x allowance allocations for a new unit in subsequent control periods will continue to be based on the unit's emissions from the previous control period until the unit establishes a baseline in accordance with 30 TAC §§101.506(b)(2) or (b)(3). All CAIR NO_x allowance allocations under the allocation methodology will be rounded to the nearest whole allowance. Allowances are only distributed in one ton increments.

Any unallocated CAIR NO_x allowances remaining in the new unit set-aside for a given control period will be distributed to CAIR NO_x units with a historical baseline heat input receiving an allocation under 30 TAC §101.506(c). Each existing unit will receive an additional allocation proportional to the ratio of its original allocation to the state's existing unit allocation, 90.5% of the Texas NO_x trading budget. The distribution is calculated by multiplying the amount of unallocated CAIR NO_x allowances remaining in the set-aside by each CAIR NO_x unit's allocation determined under §101.506(c), divided by 90.5% of the Texas NO_x trading budget, and rounded to the nearest whole allowance.

For the purposes of determining CAIR NO_x allowance allocations the following criteria are considered: a CAIR NO_x unit's control period heat input; fossil-fuel type status (coal-fired, natural gas-fired or other type fossil fuel-fired); and the total tons of NO_x emissions during a calendar year to be determined in accordance with 40 CFR Part 75, to the extent the unit was otherwise subject to those requirements for the year will be used. If a CAIR NO_x unit was not otherwise subject to the requirements of 40 CFR Part 75 for the year, the unit's control period heat input, status fossil-fuel type, and total tons of NO_x emissions during a calendar year will be based on the best available data reported to the executive director.

5.2.4 CAIR NO_x Budget Set-Aside

HB 2481 requires that an amount of CAIR NO_x allowances equivalent to 9.5% of the Texas NO_x trading budget be set aside for new units. This new unit set-aside will equate to 17,196 tpy of CAIR NO_x allowances for each control period in 2009 through 2014, and 14,330 tpy of CAIR NO_x allowances for each control period in 2015 and thereafter.

5.2.5 CAIR NO_x Allowance Compliance Supplement Pool (CSP)

30 TAC §101.508 outlines the requirements for the allocation of additional CAIR NO_x allowances for the 2009 control period from the CSP for Texas provided under 40 CFR Part 96.140. As promulgated on May 12, 2005, 40 CFR Part 96.140 provides Texas with an additional 772 CAIR NO_x allowances under the CSP. The rule language allows the CSP allowances to be distributed to those CAIR NO_x units that

achieve early NO_x reductions in 2007 and 2008 beyond any applicable state or federal emission limitation during those years. CAIR NO_x units seeking an additional allocation from the compliance supplement pool for early NO_x reductions in 2007 and 2008 will be required to monitor and report the unit's NO_x emission rate and heat input in accordance with the continuous emissions monitoring and reporting requirements under 40 CFR Part 96, Subpart HH for the entire control period in which the early reductions are being generated. The CAIR designated representative is required to submit to the executive director by July 1, 2009, a request for an allocation of CAIR NO_x allowances from the CSP in an amount not to exceed the sum of the CAIR NO_x unit's emission reductions, in tpy, during 2007 and 2008 that were not necessary to comply with any state or federal emission limitation applicable during those years.

In addition, the CSP provides for the allocation of additional CAIR NO_x allowances from the CSP for CAIR NO_x units whose compliance with the CAIR NO_x annual trading program in the 2009 control period would create undue risk to the reliability of electricity supply during 2009. The CAIR designated representative is required to submit to the executive director by July 1, 2009, a request for an allocation of CAIR NO_x allowances from the CSP in an amount not to exceed the minimum amount of CAIR NO_x allowances necessary to remove the risk to the reliability of electricity supply. The CAIR designated representative will be required to demonstrate that in the absence of the additional allocation to the unit, the unit's compliance with the CAIR NO_x annual trading program during the 2009 control period would create an undue risk to electric reliability during 2009. This demonstration is required to show that it would not be feasible to obtain a sufficient amount of electricity from other electric generation facilities or obtain a sufficient amount of CAIR NO_x allowances from the CSP by making early NO_x reductions in 2007 and 2008.

The executive director will review each request for an additional allocation from the CSP and allocate CAIR NO_x allowances for the 2009 control period to CAIR NO_x units regulated under a request. If the amount of CAIR NO_x allowances in the CSP is greater than or equal to the sum of all CAIR NO_x allowances requested, then the executive director will allocate the amount of CAIR NO_x allowances requested. If the amount of CAIR NO_x allowances in the CSP is less than the sum of all CAIR NO_x allowances requested, then the executive director will allocate to each CAIR NO_x unit regulated under a request an amount of CAIR NO_x allowances in proportion to the amount of CAIR NO_x allowances requested by a CAIR NO_x unit to the total amount of CAIR NO_x allowances requested by all CAIR NO_x units. The executive director will determine and submit to the EPA by November 30, 2009, the CAIR NO_x allowance allocations from the CSP.

5.2.6 CAIR Annual SO₂ Budget

The commission has incorporated by reference in 30 TAC §101.502 the requirements of 40 CFR Part 96, Subparts AAA - III which contains the SO₂ budget limits for Texas. The Texas CAIR SO₂ emission budget is specified in 40 CFR Part 51.124 as 320,946 tpy for the 2010-2014 period; and 224,662 tpy for 2015 and thereafter.

5.2.7 CAIR SO₂ Allocations

CAIR SO₂ allowance allocations will be distributed by the EPA based on the CAIR source's Title IV SO₂ allowance allocation. The EPA will establish CAIR compliance accounts for each CAIR source and maintain an allowance tracking system to record the deposit, transfer, and deduction for compliance of all CAIR allowances. The TCEQ incorporated by reference in 30 TAC §101.502 the requirements of 40 CFR Part 96, Subparts AAA-III, which relate to the CAIR SO₂ program.

5.2.8 Authorized Account Representatives for CAIR NO_x and SO₂ Program

Each CAIR NO_x source, including all CAIR NO_x units at the source, will have only one CAIR designated representative, with regard to all matters under the CAIR NO_x Annual Trading Program concerning the source or any CAIR NO_x unit at the source.

The CAIR designated representative is authorized by the owners and operators of the source and all such units at the source in accordance with 40 CFR Part 97 Subparts BB and II, to represent and legally bind each owner and operator in matters pertaining to the CAIR NO_x Annual Trading Program. If the CAIR NO_x source is also a CAIR SO₂ source, then this person shall be the same person as the CAIR designated representative under the CAIR SO₂ Trading Program. If the CAIR NO_x source is also subject to the Acid Rain Program, then this person shall be the same person as the designated representative under the Acid Rain Program.

5.2.9 CAIR NO_x and CAIR SO₂ Allowance Tracking System

The commission has incorporated by reference 40 CFR Part 96 Subparts FF and FFF regarding CAIR NO_x and SO₂ Allowance Tracking System which are controlled and operated by the EPA. Compliance accounts for CAIR NO_x and SO₂ sources are required for the purpose of holding CAIR NO_x and SO₂ allowances.

5.2.10 CAIR NO_x and CAIR SO₂ Allowance Transfers

A CAIR authorized account representative seeking recordation of CAIR NO_x or SO₂ allowance transfers shall submit the request to the EPA. The NO_x and SO₂ allowance transfer must include the following elements: the account numbers for both the transferor and transferee accounts; the serial number for each CAIR NO_x or SO₂ allowance in the transferor account that is to be transferred; and the name and signature of the CAIR authorized account representative of the transferor account and the date signed. 40 CFR Part 96 subparts GG and GGG have been incorporated by reference in 30 TAC §101, Subchapter 7 to meet the requirements of NO_x and SO₂ allowance transfers respectively.

5.2.11 CAIR NO_x and CAIR SO₂ Permits

All elements of the CAIR NO_x Annual Trading Program and CAIR SO₂ Trading Program are required to be federally enforceable through the issuance of a CAIR permit as a complete and separable portion of the CAIR source's Title V permit. Submission of CAIR permit applications are dictated by 40 CFR Part 96 Subpart CC for NO_x and 40 CFR Part 96 Subpart CCC for SO₂. The TCEQ has incorporated requirements for revising Title V permits in 30 TAC Chapter 122.

5.2.12 Opt-In Requirements for NO_x and SO₂ Annual Trading Programs

The CAIR rule includes a provision that other units may opt-in to the CAIR program under 40 CFR 96 Subpart II for NO_x and Subpart III for SO₂. A CAIR NO_x opt-in unit must be a unit that is: located in Texas; not considered a CAIR NO_x unit; is not covered by a retired unit exemption under 40 CFR Part 72.8; has or is required or qualified to have a Title V operating permit or other federally enforceable permit; and vents all of its emissions to a stack and meets the monitoring, recordkeeping, and reporting requirements of 40 CFR Part 96 subpart HH. Units electing to opt-in to the CAIR NO_x Annual Trading Program will be required to monitor and report the NO_x emission rate and heat input of the unit in accordance with the monitoring and reporting requirements of Subpart HH for the entire control period prior to the date on which the unit elects to enter the CAIR NO_x Annual Trading Program. The baseline heat input and baseline emission rate for each CAIR NO_x opt-in unit will depend upon the number of control periods the unit has monitored and reported heat input and emission rate data in accordance with Subpart HH. If the unit has monitored and reported for only one control period, the baseline heat input and emission rate will be the unit's total heat input and NO_x emission rate for the control period

immediately preceding the date on which the unit elects to opt-in. For units that have monitored and reported for more than one control period, the baseline heat input and emission rate will be the average of the most recent three year period. The opt-in provisions of Subpart II allow opt-in units to choose from two different allocation methods for receiving an allocation of CAIR NO_x allowances. The general approach will allocate CAIR NO_x allowances to opt-in units at 70% of their baseline NO_x emission rate with no additional reductions required after the 2009 control period. An alternative approach will allocate CAIR NO_x allowances at the baseline levels for the 2009 through 2014 control periods, but require additional reductions starting in 2015. The CAIR NO_x allowance allocation for each control period beginning in 2015, and thereafter, will be based on a NO_x emission rate equal to the lesser of 0.15 lb of NO_x/MMBtu, the unit's baseline emission rate, or the most stringent state or federal NO_x emission limit applicable for any time during the applicable control period. Units may elect to opt-in to the CAIR NO_x Annual Trading Program without electing to opt-in to the CAIR SO₂ Trading Program and may withdraw from participation in the CAIR NO_x Annual Trading Program after five years of participation.

Subpart III describes the opt-in provisions for the CAIR SO₂ Trading Program. The opt-in provisions apply to a unit that is not already a CAIR SO₂ unit under 40 CFR Part 96.204 or covered by a retired unit exemption; has or is qualified to have a Title V operating permit; vents all emissions to a stack; and can meet the monitoring, recordkeeping, and reporting requirements of 40 CFR Part 96, Subpart HHH. CAIR SO₂ opt-in units will be required to apply for and obtain a CAIR permit as prescribed under Subpart CCC. Units electing to opt-in to the CAIR SO₂ Trading Program will be required to monitor and report the SO₂ emission rate and heat input of the unit in accordance with the monitoring and reporting requirements of Subpart HHH for the entire control period prior to the date on which the unit elects to enter the CAIR SO₂ Trading Program. The baseline heat input and baseline emission rate for each CAIR SO₂ opt-in unit will be dependent upon the number of control periods the unit has monitored and reported heat input and emission rate data in accordance with Subpart HHH. If the unit has monitored and reported for only one control period, the baseline heat input and emission rate will be the unit's total heat input and SO₂ emission rate for the control period immediately preceding the date on which the unit elects to opt-in. For units that have monitored and reported for more than one control period, the baseline heat input and emission rate will be the average of the most recent three year period. The opt-in provisions of Subpart III allow opt-in units to choose from two different allocation methods for receiving an allocation of CAIR SO₂ allowances. The general approach will allocate CAIR SO₂ allowances to opt-in units at 70% of their baseline SO₂ emission rate with no additional reductions required after the 2010 control period. An alternative approach would allocate CAIR SO₂ allowances at the baseline levels for the 2010 through 2014 control periods, but require greater reductions starting in 2015. The CAIR SO₂ allowance allocation for each control period beginning in 2015, and thereafter, will be based on a SO₂ emission rate equal to the lesser of the unit's baseline emission rate multiplied by 10% or the most stringent state or federal SO₂ emission limit applicable for any time during the applicable control period. Units may elect to opt-in to the CAIR SO₂ Trading Program without electing to opt-in to the CAIR NO_x Annual Trading Program and may withdraw from participation in the CAIR SO₂ Trading Program after five years of participation.

5.3 ENFORCEMENT

Requirements for allowance tracking and deductions for excess emissions are discussed in the above Section 5.2.10 CAIR NO_x and CAIR SO₂ Allowance Transfers, and requirements relating to the monitoring, recordkeeping and reporting certifications requirements are discussed below in Section **5.4 MONITORING AND REPORTING REQUIREMENTS**. CAIR sources will be required, under the model rule, to demonstrate compliance through the installation and operation of continuous emissions monitoring systems as required under 40 CFR Part 75.

5.4 MONITORING AND REPORTING REQUIREMENTS

Title 40 CFR Part 51.123(I) requires that the state provide for monitoring the status of compliance with any control measures. To satisfy this requirement, the commission has incorporated by reference in 30 TAC §101.502 the obligations in 40 CFR Part 96, Subparts HH and HHH that require CAIR NO_x and CAIR SO₂ sources to comply with the monitoring, recordkeeping, and reporting provisions of the model rule as well as the applicable sections of 40 CFR Part 75, subpart H. All affected sources will be required to monitor and report their emissions in accordance with 40 CFR Part 75. In addition, the model rule and 40 CFR Part 75 provide for certification of the monitoring systems to ensure accurate representation of emissions. Sources with monitoring systems already certified under 40 CFR Part 75 will not be required to recertify those same monitoring systems. However, owners or operators of CAIR subject units that have previously approved alternative monitoring petitions under 40 CFR Part 75 will need to resubmit the petitions to the EPA per 40 CFR Parts 96.171(c) and 96.271(c). Source information management, emissions data reporting, and allowance trading will be accomplished using on-line systems similar to those currently used for the Title IV Acid Rain and NO_x SIP Call Programs.

CHAPTER 6: FUTURE ATTAINMENT PLANS

During the process of developing the CAIR SIP, the EPA published and adopted rule changes for the CAIR program, “Section 126 Petition from North Carolina to Reduce Interstate Transport of Fine Particulate Matter and Ozone; Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone; Revisions to CAIR; Revisions to the Acid Rain Program,” Vol. 70 FR 49707, August 24, 2005. However, the adopted changes were not finalized until April 28, 2006. Therefore, changes in EPA’s revised CAIR rule will need to be addressed in a future SIP revision. The TCEQ anticipates initiating rulemaking and a SIP revision to incorporate the needed changes.