

# Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

**To:** Commissioners **Date:** January 22, 2010  
**Thru:** LaDonna Castañuela, Chief Clerk  
Mark R. Vickery, P.G., Executive Director  
**From:** *PH* Susana M. Hildebrand, P.E., Chief Engineer  
**Docket No.:** 2008-0335-SIP  
**Subject:** Commission Approval for Adoption of the Clean Air Interstate Rule (CAIR) State Implementation Plan (SIP) Revision  
  
Rule Project No. 2007-051-SIP-NR

## Background and reason(s) for the SIP revision:

To meet the requirements established by the United States Environmental Protection Agency (EPA) for the CAIR Phase II (2015 and thereafter) nitrogen oxides (NO<sub>x</sub>) allocation submittal, Texas must submit a CAIR SIP revision to the EPA in early 2010. This revision will allow the EPA adequate time to review and approve CAIR Phase II for Texas to use the NO<sub>x</sub> allocation methodology specified in Senate Bill (SB) 1672,<sup>1</sup> 80th Texas Legislature, Regular Session. In addition to the allocation issues relating to CAIR, the EPA has also revised the federal CAIR program five times since Texas adopted its initial CAIR SIP revision on July 12, 2006. This CAIR SIP revision will also address revisions to 30 Texas Administrative Code (TAC) Chapter 101 from the legislation.

For Texas to submit an approvable CAIR SIP revision, the state and federal requirements need to be consistent with each other. If Texas does not submit a CAIR SIP revision that incorporates the federal revisions, the EPA would require Texas to use the EPA's model CAIR rule NO<sub>x</sub> allocation methodology. The model CAIR rule's NO<sub>x</sub> allocation methodology is substantially different than the methodology prescribed in SB 1672. Texas' NO<sub>x</sub> allocation methodology for Phase I was approved by the EPA and published in the *Federal Register* on July 30, 2007 (72 FR 145).

In 2007, the 80th Texas Legislature passed SB 1672, requiring the Texas Commission on Environmental Quality (TCEQ) to incorporate revisions to the federal CAIR that the EPA finalized since the initial adoption of the CAIR SIP revision on July 12, 2006, as well as revisions to the NO<sub>x</sub> allocation methodology. SB 1672 contains provisions relating to correcting the number of minimum periods specified for NO<sub>x</sub> allowance adjustments that were directed by House Bill (HB) 2481.<sup>2</sup> HB 2481 revised the baseline of existing units every five years by using the three highest years heat input data from the previous seven years. However, this seven-year period did not provide adequate time to accommodate the EPA's requirement of providing allocations to them approximately four years in advance of each control period. Therefore, SB 1672 changed the number of control periods from seven to nine and shifted the allocation update from 2016 to 2018.

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<sup>1</sup> Act of May 10, 2007, 80th Leg., R.S., SB 1672, §2 (codified at Tex. Health & Safety Code §382.0173, concerning Adoption of Rules Regarding Certain SIP Requirements and Standards of Performance for Certain Sources).

<sup>2</sup> Act 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).

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Because of this legislative change in SB 1672, new<sup>3</sup> electric generating units (EGU) in the years 2016 and 2017 with five or more consecutive years of operation will roll into the existing<sup>4</sup> EGU allocation pool. This is consistent with how new units are handled for the 2015 control period under the federal CAIR program. However, beginning in 2018 each existing unit's baseline heat input will be revised based on the average of the highest three years from control periods one through five of the preceding nine control periods. In accordance with SB 1672, this baseline readjustment will happen every five years. During this five-year baseline readjustment, new units with five or more years of operation will be reclassified from a new unit to an existing unit. Therefore, the number of NO<sub>x</sub> allowances will not fluctuate and will remain consistent for five years at a time.

SB 1672 also omits the reference date of the federal CAIR program that was specified in HB 2481 from the 79th Texas legislative session. This change will enable the commission to make subsequent changes as dictated by federal rule change for CAIR.

Revisions to the CAIR SIP and rule to implement SB 1672 were proposed to the commissioners on May 21, 2008. On July 11, 2008, the United States Court of Appeals District of Columbia Circuit (Court) (No. 05-1244) vacated CAIR and the CAIR Federal Implementation Plan (FIP). Because of the Court's ruling, the TCEQ withdrew the CAIR SIP and rule revision adoption packages from the November 19, 2008, agenda to await further direction from the EPA.

On December 23, 2008, the Court issued a revised opinion to remand, without vacating, CAIR to the EPA. Therefore, CAIR will remain in effect while the EPA analyzes data and conducts rulemaking to modify the program to comply with the Court's July 2008 opinion. The Court declined to impose a schedule by which the EPA must complete the rulemaking, but reminded the EPA that the Court does "... not intend to grant an indefinite stay of the effectiveness of this Court's decision." Therefore, with CAIR in place, staff is proceeding with the CAIR program as directed by the Texas legislature.

**Scope of the SIP revision:**

**A) Summary of what the SIP revision will do:** The adopted SIP revision will implement revisions of the federal CAIR rule and SB 1672. The revision incorporates federal changes to the CAIR program; methodology for allocation of CAIR NO<sub>x</sub> allowances as specified by SB 1672; and non-substantive administrative changes.

**B) Scope required by federal regulations or state statutes:** As specified by SB 1672, the SIP revision will revise the initial baseline heat input adjustment to 2018, revise the adjusted baseline heat input calculation by using the data in one through five of the previous nine control periods and incorporate any federal changes to CAIR. The EPA had five revisions to the CAIR program since May 12, 2005, published in the *Federal Register*, which are incorporated into this SIP revision. Following are the federal changes to the CAIR program since May 12, 2005, that are being incorporated in this SIP revision. A brief description of each change is given from the most recent change as well as the *Federal Register* citation to provide additional information.

**Federal Implementation Plans (FIP) for the Clean Air Interstate Rule: Automatic Withdrawal Provisions – 40 CFR Part 52 – Direct Final Rule**

**November 2, 2007, *Federal Register***

The EPA took a direct final action to amend the FIP for CAIR to provide for an automatic withdrawal of CAIR FIPs in a state upon the effective date of the EPA's approval of a full SIP revision meeting the

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<sup>3</sup>New EGU - Units commencing operation on or after January 1, 2001.

<sup>4</sup>Existing EGU - Units commencing operation before January 1, 2001.

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CAIR requirements. All CAIR states are required to revise their SIPs to include control measures to reduce the emission of NO<sub>x</sub> and/or sulfur dioxide (SO<sub>2</sub>). In this FIP rulemaking, the EPA stated it would withdraw the FIP in a state in coordination with the full approval of the state's CAIR SIP. In this action, the EPA makes the FIP withdrawal for the state automatic upon approval of the full CAIR SIP revision. The EPA has said that it will give partial approval if the SIP is approved after the EPA makes allowances under the FIP for the year; the SIP approval would be fully valid for the next year. The EPA believes that this will correct the deficiency that provided the basis for the EPA's promulgation of the FIPs. The direct final rule was effective on January 16, 2008.

**Revisions to Definition of Cogeneration Unit (CAIR); CAIR Federal Implementation Plans (FIP); Clean Air Mercury Rule (CAMR); and Technical Corrections to CAIR, CAIR FIPs, CAMR, and the Acid Rain Program Rules – 40 CFR Parts 51, 60, 72, 78, 96, and 97**

**October 19, 2007, *Federal Register***

The CAIR, CAIR FIP, and CAMR rule each include an exemption for cogeneration units that meet certain criteria. In light of information concerning biomass-fired cogeneration units that may not qualify for the exemption due to their particular combination of fuel and technical design characteristics, the EPA changed the cogeneration unit definition in CAIR, the CAIR model cap and trade rules, the CAIR FIPs, CAMR, and the CAMR model cap and trade rule. Specifically, the EPA revised the calculation methodology for the efficiency standard in the cogeneration unit to exclude energy input from biomass making it more likely for units co-firing biomass to be able to meet the efficiency standard and qualify for an exemption. Because the EPA predicts that this change will only affect a small number of relatively low-emitting units, the revision will have little effect on the projected emissions reductions and the environmental benefits of these rules. This action also clarifies the term "total energy input" used in the efficiency calculation and makes minor technical corrections to CAIR, the CAIR FIPs, CAMR, and the Acid Rain Program rules. This rule revision was effective on November 19, 2007.

**Clean Air Interstate Rule (CAIR) and CAIR Federal Implementation Plans (FIP); Corrections – 40 CFR Parts 51 and 97**

**October 1, 2007, *Federal Register***

The EPA made minor corrections to CAIR to restore a phrase of regulatory text related to state annual emissions reporting requirements that was inadvertently deleted when the rule was amended in 2006. This rule also corrects typographical errors in the spellings of three states in the CAIR regulatory text and corrects a typographical error in a section citation in the CAIR FIP regulatory text. This rule revision was effective on October 1, 2007.

**Clean Air Interstate Rule (CAIR) and Federal Implementation Plans for CAIR; Corrections – 40 CFR Parts 51, 96, and 97**

**December 13, 2006, *Federal Register***

The EPA made minor corrections to the CAIR and the FIPs for CAIR to clarify text that may potentially be misleading. This rule does not change any of CAIR or CAIR FIPs rule requirements or substantively change the rules in any way. This rule revision was effective on December 13, 2006.

**Rulemaking on 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 the Clean Air Interstate Rule; Revisions to the Acid Rain Program – CFR Parts 51, 52, 72, 73, 74, 78, 96, and 97**

**April 28, 2006, *Federal Register***

The EPA took action to address the interstate transport of emissions of NO<sub>x</sub> and SO<sub>2</sub> that contribute significantly to nonattainment and maintenance problems with respect to the National Ambient Air

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Quality Standards (NAAQS) for  $PM_{2.5}$  and eight-hour ozone. As one part of this action, the EPA provided its final response to a petition submitted to the EPA by the State of North Carolina (petitioner) under Section 126 of the Federal Clean Air Act (FCAA). The petitioner requested that the EPA find that  $SO_2$  and/or  $NO_x$  emissions from EGUs in 13 states were significantly contributing to particulate matter of 2.5 microns and less ( $PM_{2.5}$ ) and/or eight-hour ozone nonattainment and maintenance problems in North Carolina and requested that the EPA establish control requirements to prohibit such significant contribution. The EPA denied the petition because, in this action, the EPA promulgated FIPs for all jurisdictions covered by the CAIR to address interstate transport.

The FIPs will regulate EGUs in the affected states and achieve the emissions reductions requirements established by the CAIR states that do not have approved SIPs to achieve the reductions. As the control requirements for the FIPs, the EPA adopted the model trading rules that the EPA provided in CAIR as a control option for states, with minor changes to account for federal rather than state implementation.

This action also revised the CAIR SIP model trading rules in order to address the interaction between the EPA-administered CAIR FIP trading programs being promulgated and the EPA-administered CAIR state trading programs that will be created by any state that elects to submit a SIP establishing such a trading program to meet the requirements of the CAIR. In addition, the EPA took final action on its reconsideration of the definition of EGU as it relates to solid waste incinerators.

This action also made revisions to the Title IV Acid Rain Program in order to make the administrative appeals procedures, which currently apply to final determinations by the Administrator under the EPA-administered CAIR state trading programs, also apply to the EPA-administered CAIR state trading programs and to the EPA-administered trading program under the FIP action. In addition, the EPA made certain minor revisions to the Acid Rain Program that will apply to all affected units.

The definition of CAIR EGU applicability has also been revised. 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 later of November 15, 1990, or the startup 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. This rule revision became effective on June 27, 2006.

**C) Additional staff recommendations that are not required by federal rule or state statute:** Because of the legislative change in SB 1672 that shifted the revision of the baseline from 2016 to 2018, staff is proposing that new units in the years 2016 and 2017 with five or more consecutive years of operation receive allowances from the existing allocation pool. This revision is consistent with how new units that become existing units with five or more consecutive years of operation are provided  $NO_x$  allowance allocations for the 2015 control period under the federal CAIR program.

Beginning in 2018 each existing unit's baseline heat input will be revised based on the average of the highest three years from control periods one through five of the preceding nine control periods. In accordance with

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SB 1672, this baseline readjustment will happen every five years. Therefore, starting in 2018, new units during this five-year baseline readjustment, with five or more years of operation, will be reclassified from a new unit to an existing unit. Therefore, the number of NO<sub>x</sub> allowance allocations would not fluctuate and would remain constant for five years. This consistency will provide stability to EGUs as they plan operations.

**Statutory authority:**

Texas Water Code,

- §5.103, Rules; and
- §5.105, General Policy.

Texas Health and Safety Code,

- §382.002, Policy and Purpose;
- §382.011, General Powers and Duties;
- §382.012, State Air Control Plan;
- §382.017, Rules;
- §382.0173, Adoption of Rules Regarding Certain SIP Requirements and Standards of Performance for Certain Sources; and
- FCAA, 42 United States Code, §§7401 *et seq.*

**Effect on the:**

**A) Regulated community:** EGUs as defined by the EPA, including investor-owned utilities, municipally owned utilities, independent power producers, electric cooperatives, and river authorities, will be affected by rule revisions associated with this CAIR SIP revision. No specific fiscal impact is anticipated with this SIP revision. The fiscal impact, if any, will be tied to the proposed changes to Chapter 101.

**B) Public:** The public will realize public health and environmental benefits based on the reductions in NO<sub>x</sub> and SO<sub>2</sub> emissions. The EPA does not expect a significant impact to regional electricity prices from CAIR.

**C) Agency programs:** The Chief Engineer's Office will allocate CAIR NO<sub>x</sub> annual allowances to applicable sites.

**Stakeholder meetings:**

No stakeholder meetings were held.

**Public comment:**

The public comment period opened on September 25, 2009, and closed on October 26, 2009. The TCEQ received one comment from the EPA addressing a typographical error in the SIP narrative.

**Significant changes from proposal:**

There are no significant changes from proposal.

**Potential controversial concerns and legislative interest remaining after proposal and public comment:**

None.

**Does this SIP revision affect any current policies or require development of new policies?**

No.

**What are the consequences if this SIP revision does not go forward? Are there alternatives to the SIP revision?**

The CAIR SIP revision is needed because of federal rule changes and state statute. If the CAIR SIP revision does not proceed, Texas will not have an approved CAIR SIP for Phase II of CAIR that begins in 2015 and

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therefore will not be able to allocate NO<sub>x</sub> allowances as directed by SB 1672. To meet the requirements established by the EPA for CAIR Phase II NO<sub>x</sub> allocation submittal, Texas must submit a CAIR SIP revision to the EPA by early 2010. This timeline will allow the EPA adequate time to review and approve the CAIR Phase II for Texas to use the NO<sub>x</sub> allocation methodology specified in SB 1672. The Phase II NO<sub>x</sub> allocations for the 2015 control period must be submitted to the EPA by October 31, 2011.

**Key points in adoption schedule:**

**Proposal date:** September 9, 2009

**Public hearing date:** October, 20, 2009, Fort Worth; October 21, 2009, Austin; and October 22, 2009, Houston

**Public comment period:** September 25 - October 26, 2009

**Anticipated adoption date:** February 10, 2010

**Agency contacts:**

Melissa A. Kuskie, SIP Project Manager, 239-6098, Air Quality Division

Terry Salem, Staff Attorney, 239-0469

Amy Browning, Staff Attorney, 239-0891

**Attachments**

SB 1672

cc: Chief Clerk, 5 copies  
Executive Director's Office  
Susana M. Hildebrand, P.E.  
Kevin Patteson  
Curtis Seaton  
Daniel Womack  
Office of General Counsel  
Melissa A. Kuskie

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AN ACT

relating to nitrogen oxide allowance allocation adjustments and the incorporation of modifications to federal rules under the state implementation plan.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Subsections (b), (c), and (e), Section 382.0173, Health and Safety Code, are amended to read as follows:

(b) The commission may require emissions reductions in conjunction with implementation of the rules adopted under Subsection (a) only for electric generating units. The commission shall make permanent allocations that are reflective of the allocation requirements of 40 C.F.R. Subparts AA through HH and Subparts AAA through HHH of Part 96 and 40 C.F.R. Subpart HHHH of Part 60, as applicable, at no cost to units as defined in 40 C.F.R. Sections [~~Section~~] 51.123 and 60.4102 using the United States Environmental Protection Agency's allocation method as specified by 40 C.F.R. Section 60.4142(a)(1)(1) [~~as issued by that agency on May 12, 2005,~~] or 40 C.F.R. Section 96.142(a)(1)(1) [~~as issued by that agency on May 18, 2005,~~] as applicable, with the exception of nitrogen oxides which shall be allocated according to the additional requirements of Subsection (c). The commission shall maintain a special reserve of allocations for new units commencing operation on or after January 1, 2001, as defined by 40 C.F.R. Subparts AA through HH and Subparts AAA through HHH of Part 96 and

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1 40 C.F.R. Subpart HHHH of Part 60, as applicable, with the exception  
2 of nitrogen oxides which shall be allocated according to the  
3 additional requirements of Subsection (c).

4 (c) Additional requirements regarding NOx allocations:

5 (1) The commission shall maintain a special reserve of  
6 allocations for nitrogen oxide of 9.5 percent for new units.  
7 Beginning with the 2015 control period, units shall be considered  
8 new for each control period in which they do not have five years of  
9 operating data reported to the commission prior to the date of  
10 allocation for a given control period. Prior to the 2015 control  
11 period, units that commenced operation on or after January 1, 2001,  
12 will receive NOx allocations from the special reserve only.

13 (2) Nitrogen oxide allowances shall be established for  
14 the 2009-2014 control periods for units commencing operation before  
15 January 1, 2001, using the average of the three highest amounts of  
16 the unit's adjusted control period heat input for 2000 through  
17 2004, with the adjusted control period heat input for each year  
18 calculated as follows:

19 (A) if the unit is coal-fired during the year,  
20 the unit's control period heat input for such year is multiplied by  
21 90 percent;

22 (B) if the unit is natural gas-fired during the  
23 year, the unit's control period heat input for such year is  
24 multiplied by 50 percent; and

25 (C) if the fossil fuel fired unit is not subject  
26 to Paragraph [Subparagraph] (A) or (B) of this subdivision  
27 [paragraph], the unit's control period heat input for such year is

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1 multiplied by 30 percent.

2 (3) Before the allocation date specified by EPA for  
3 the control period beginning January 1, 2018 [~~2016~~], and every five  
4 years thereafter, the commission shall adjust the baseline for all  
5 affected units using the average of the three highest amounts of the  
6 unit's adjusted control period heat input for periods one through  
7 five of the preceding nine [~~seven~~] control periods, with the  
8 adjusted control period heat input for each year calculated as  
9 follows:

10 (A) for units commencing operation before  
11 January 1, 2001:

12 (1) if the unit is coal-fired during the  
13 year, the unit's control period heat input for such year is  
14 multiplied by 90 percent;

15 (11) if the unit is natural gas-fired  
16 during the year, the unit's control period heat input for such year  
17 is multiplied by 50 percent; and

18 (111) if the fossil fuel fired unit is not  
19 subject to Subparagraph (1) or (11) [~~Subdivision (3)(A)(1) or~~  
20 ~~(3)(A)(11)] of this paragraph [subparagraph], the unit's control  
21 period heat input for such year is multiplied by 30 percent; and[-]~~

22 (B) for units commencing operation on or after  
23 January 1, 2001, in accordance with the formulas set forth by USEPA  
24 in 40 C.F.R. 96.142 with any corrections to this section that may be  
25 issued by USEPA prior to the allocation date.

26 (e) In adopting rules under Subsection (a), the commission  
27 shall incorporate any modifications to the federal rules cited in

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1 this section that result from:

2           (1) a request for rehearing regarding those rules that  
3 is filed with the United States Environmental Protection Agency;

4           (2) ~~or from~~ a petition for review of those rules that  
5 is filed with a court; or

6           (3) a final rulemaking action of the United States  
7 Environmental Protection Agency.

8           SECTION 2. This Act takes effect immediately if it receives  
9 a vote of two-thirds of all the members elected to each house, as  
10 provided by Section 39, Article III, Texas Constitution. If this  
11 Act does not receive the vote necessary for immediate effect, this  
12 Act takes effect September 1, 2007.

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David Newburn  
President of the Senate

Jim Cullin  
Speaker of the House

I hereby certify that S.B. No. 1672 passed the Senate on April 12, 2007, by the following vote: Yeas 31, Nays 0.

Daisy Spaw  
Secretary of the Senate

I hereby certify that S.B. No. 1672 passed the House on April 27, 2007, by the following vote: Yeas 133, Nays 0, two present not voting.

Robert Nancy  
Chief Clerk of the House

Approved:

10 MAY '07

Date

RICK PERCY  
Governor

FILED IN THE OFFICE OF THE  
SECRETARY OF STATE  
6:20 PM O'CLOCK

MAY 10 2007

Roger Whinnif

