

ORDER OF THE STATE OF WISCONSIN  
NATURAL RESOURCES BOARD  
CREATING RULES

The Wisconsin Natural Resources Board proposes an order to **create** NR 432 relating to the establishment of provisions for major electric generating units in Wisconsin to comply with the Clean Air Interstate Rule (CAIR) promulgated by the U.S. Environmental Protection Agency.

AM-03-06

Summary Prepared by the Department of Natural Resources

1. **Statute interpreted:** s. 285.11(6), Stats. The State Implementation Plan developed under s. 285.11(6), Stats., is revised.
2. **Statutory authority:** ss. 227.11(2)(a), 227.14(1m) and 285.11(1) and (6), Stats.
3. **Explanation of agency authority:**

Section 227.11(2)(a), Stats., gives state agencies general rule-making authority. Section 227.14(1m) Stats., allows state agencies to use the format of federal regulations if the proposed state rule is to be administered in a manner identical or similar to the federal rule. Section 285.11(1) Stats., gives the Department the authority to promulgate rules to implement and consistent with ch. 285, Stats. Section 285.11(6), Stats., authorizes the Department to develop and revise a state implementation plan for the prevention, abatement and control of air pollution.

4. **Related statute or rule:**

Chapter NR 428, Wis. Adm. Code, regulates the emissions of NO<sub>x</sub> from major stationary sources in ozone nonattainment areas including electric generating units. Chapters NR 417 and NR 418, Wis. Adm. Code, regulate SO<sub>2</sub> emissions from stationary sources in SO<sub>2</sub> nonattainment areas and statewide, including electric generating units.

5. **Plain language analysis:**

EPA has promulgated federal rules to reduce the interstate transport of fine particles and ozone (Clean Air Interstate Rule – CAIR) for 28 states including Wisconsin. CAIR focuses on reductions of emissions of nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) from fossil-fuel-fired electric generating units (EGUs). The federal rule caps emissions from EGUs in two phases (2009 and 2015) and allows EGUs to meet their respective emissions caps through installation of controls or by trading emission allowances through a federally administered trading program. The federal rule allows states to implement the federal rule through various state-specific options including varying the structure of the allocation of NO<sub>x</sub> allowances to state utilities from the federal model rule. This proposed rule involves the NO<sub>x</sub> allocation structure for the CAIR NO<sub>x</sub> annual allowances and the CAIR NO<sub>x</sub> ozone season allowances. The structure is the same for the two programs. The SO<sub>2</sub> program is administered in its entirety by the U.S. EPA and is not addressed by this rule.

The main allocation pool consists of the allowances allocated to the state in its state budget minus

allowances in the new unit set-aside. The NO<sub>x</sub> allowances are allocated from the main allocation pool to existing units (those units commencing operation before January 1, 2001) based on the average of the top three years of electric generation over a five year period. The allowances are distributed to the units in the main allocation pool based upon a unit's percentage share of the total generation for all units.

For new units (those units commencing operation on or after January 1, 2001), a new unit set-aside of 7% of the state budget is proposed. New units are allocated allowances from this set-aside based on the unit's NO<sub>x</sub> emissions in the previous year until the unit has operated for five years and has established a baseline. (Once a new unit has operated 5 years and established a baseline, the unit's allowances will be allocated from the main allocation pool, not the new unit set-aside.) Allowances from the new unit set-aside are applied for and allocated in the compliance year starting in 2009. If the new unit set-aside is oversubscribed, the set-aside allowances are distributed to the applicants on a percentage basis. If the new unit set-aside is undersubscribed, the remaining set-aside allowances are distributed to the units in the main allocation pool.

Vintage year 2009-2014 allowances are allocated from the main allocation pool in 2007 based on generation data from 2000-2004. Starting in 2011, allowances from the main allocation pool are allocated yearly, four years in advance of the compliance year. In 2011, the unit baseline is updated every five years to reflect current operating data and the state baseline is updated every year to incorporate new units into the main allocation pool that have established a baseline.

Combined heat and power units receive allowances based on electricity generation and useful thermal energy produced.

The compliance supplement pool (CSP) consists of additional CAIR NO<sub>x</sub> annual allowances which are distributed only in calendar year 2009 to CAIR NO<sub>x</sub> units which demonstrate that they achieved early emission reductions in 2007 and 2008 at the 2009 CAIR level of compliance or compliance would create extreme hardship for the unit. There are 4,989 CAIR NO<sub>x</sub> annual allowances available for distribution from the CSP. If there are excess allowances after the 2009 distribution, these allowances are retired.

## **6. Summary of, and comparison with, existing or proposed federal regulation:**

The federal regulation that addresses interstate transport of air pollution, the Clean Air Interstate Rule (CAIR), is found at 40 CFR Part 97. Part 97 details the Federal Implementation Plan (FIP) which creates an emission trading market across the 28 eastern states for NO<sub>x</sub> and SO<sub>2</sub> emissions from major electric generating units implemented and administered by the EPA. The CAIR gives the states the discretion to adopt an allocation structure for the NO<sub>x</sub> allowances for the CAIR Annual NO<sub>x</sub> and the CAIR ozone season NO<sub>x</sub> trading programs while relying on the FIP for the implementation of the trading programs at the federal level. This proposed rule covers the NO<sub>x</sub> allocation structures for both the CAIR Annual NO<sub>x</sub> and CAIR ozone season trading programs.

## **7. Comparison with rules in adjacent states:**

Illinois, Indiana, Iowa, Michigan and Minnesota all are subject to the requirement to submit a CAIR State Implementation Plan. From a review of the preliminary drafts of the states' rules and discussions with each state's rule drafter, it appears that all five states will participate in the federal trading program like the proposal by the department. Iowa has finalized and adopted its CAIR SIP which will be effective July 12, 2006. None of the remaining adjacent states have finalized their rules.

## **8. Summary of factual data and analytical methodologies:**

The proposed structure for the NO<sub>x</sub> allocations is based upon the review of several guidance documents, technical documents and modeling prepared by the United States Environmental Protection Agency, the State and Local Air Pollution Control Agencies associations (STAPPA/ ALAPCO), Lake Michigan Air Directors Consortium (LADCO) and the National Renewables Energy Lab. These documents are available through the DNR's website at [www.dnr.wi.gov/org/aw/air/hot/8hrozonestd/cairbart/](http://www.dnr.wi.gov/org/aw/air/hot/8hrozonestd/cairbart/) or available from Marney Hoefer at (608) 267-0577 or [Margaret.hoefer@dnr.state.wi.us](mailto:Margaret.hoefer@dnr.state.wi.us). In addition, the proposed structure is based in part on comments received through a series of public information meetings and presentations to the Clean Air Act Task Force which DNR staff conducted.

## **9. Analysis and supporting documents used to determine effect on small business or in preparation of economic impact report:**

The proposed rule is not expected to have a significant effect on small businesses. The major EGUs subject to the emission reduction requirements of CAIR are not small businesses. Any costs which EGUs expend to comply with the CAIR requirements are likely to be passed on to their customers, which will include small businesses. In preparing the economic impact report, staff of the Department of Natural Resources relied on modeling results from Integrated Planning Model (IPM) to determine the expected controls installed by EGUs in Wisconsin. Using the IPM results, staff determined the expected cost of control. Additionally, staff reviewed the control costs for major EGUs associated with operating within the number of allowances the units are initially allocated under the proposed draft rule.

## **10. Effect on small business:**

The proposed rule is not expected to have a significant effect on small businesses. Because EGUs may pass along the costs of complying with CAIR to their customers, the proposed rule may minimally increase electricity rates, resulting in small businesses having to pay more for electricity.

## **11. Agency contact person:**

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## **12. Place where comments are to be submitted and deadline for submission:**

Written comments may be submitted at the public hearings, by regular mail, fax or email to:

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Written comments may also be submitted to the Department of Natural Resources using the Wisconsin Administrative Rules Internet Web site at <http://adminrules.wisconsin.gov>.

Hearing dates and submission deadlines are to be determined.

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SECTION 1. Chapter NR 432 is created to read:

CHAPTER NR 432

ALLOCATION OF CLEAN AIR INTERSTATE RULE NO<sub>x</sub> ALLOWANCES

**NR 432.01 Applicability; purpose.** (1) **APPLICABILITY.** (a) This chapter applies to the owner or operator of any source that includes a CAIR NO<sub>x</sub> unit or a CAIR renewable unit. A CAIR NO<sub>x</sub> unit is any stationary, fossil fuel-fired boiler or stationary, fossil fuel-fired combustion turbine which has served at any time, since the later of November 15, 1990 or the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 MWe producing electricity for sale, except for those units that are excluded under par. (b).

(b) The following units are not CAIR NO<sub>x</sub> units:

1. Any cogeneration unit serving a generator which does not supply, in any calendar year, more than one-third of its potential electric output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale.

2. Any solid waste incineration unit that commenced operation before January 1, 1985 and which had an average annual consumption of non-fossil fuel for 1985 to 1987 exceeding 80% of the unit's total fuel consumption, on a Btu basis, and an average annual fuel consumption of non-fossil fuel for any 3 consecutive calendar years after 1990 exceeding 80% of the unit's total fuel consumption, on a Btu basis.

3. Any solid waste incineration unit that commenced operation on or after January 1, 1985 and which had an average annual consumption of non-fossil fuel for the first 3 calendar years of operation exceeding 80% of the unit's total fuel consumption, on a Btu basis, and an average annual consumption of non-fossil fuel for any 3 consecutive calendar years after 1990 exceeding 80% of the unit's total fuel consumption, on a Btu basis.

(c) If a unit no longer meets the applicable exclusion in par. (b), the unit shall become a CAIR NO<sub>x</sub> unit starting on January 1 of the first year following the year in which the unit ceases to meet the exclusion requirements.

(2) PURPOSE. This chapter is adopted under s. 285.11, Stats., to allocate the NO<sub>x</sub> allowances for the CAIR NO<sub>x</sub> annual trading program and the CAIR NO<sub>x</sub> ozone season trading program. The purpose of this chapter is to implement only those parts of the CAIR NO<sub>x</sub> annual trading program and the CAIR NO<sub>x</sub> ozone season trading program that is administered by the EPA under the federal implementation plan for the CAIR relating to the allocation of CAIR NO<sub>x</sub> allowances.

**Note:** This chapter modifies the schedule and methodology for allocating CAIR nitrogen oxides (NO<sub>x</sub>) allowances that are set forth in the federal implementation plan. This chapter is not intended to modify in any other way the implementation or administration in Wisconsin of the federal implementation plan for CAIR. The CAIR NO<sub>x</sub> federal implementation plan is published in 40 CFR, part 97.

**NR 432.02 Definitions.** The definitions contained in ch. NR 400 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

(1) "Actual weighted average NO<sub>x</sub> emission rate" means, for an NO<sub>x</sub> averaging plan under s. NR 409.065(7), for a year the sum of the products of the actual annual average NO<sub>x</sub> emission rate and actual annual heat input, as determined in accordance with 40 CFR part 75 transfers, for all units in the NO<sub>x</sub> averaging plan for the year divided by the sum of the actual annual heat input, as determined in accordance with 40 CFR part 75, for all units in the NO<sub>x</sub> averaging plan for the year.

(2) "Allocate" or "allocation" means, with regard to CAIR NO<sub>x</sub> allowances, the determination by the department of the amount of CAIR NO<sub>x</sub> allowances to be credited to a CAIR NO<sub>x</sub> unit, a CAIR renewable unit, a new unit set-aside, or other entity.

(3) "Biomass" means a resource that derives energy from wood or plant material or residue, biological waste, crops grown for use as a resource or landfill gases. "Biomass" does not include garbage,

as defined in s. 289.01(9), Stats., or nonvegetation – based industrial, commercial or household waste, except that "biomass" includes refuse-derived fuel used for a renewable facility that was in service before January 1, 1998.

(4) "Boiler" means an enclosed fossil fuel-fired or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

(5) "CAIR" means the federal clean air interstate rule promulgated in 40 CFR part 97.

(6) "CAIR designated representative" means, for a CAIR NO<sub>x</sub> source and each CAIR NO<sub>x</sub> unit at the source, the natural person who is authorized by the owners and operators of the source and all units at the source, in accordance with 40 CFR 97 subparts BB and HH and subparts BBBB and HHHH, to represent and legally bind each owner and operator in matters pertaining to the CAIR NO<sub>x</sub> annual trading program and the CAIR NO<sub>x</sub> ozone season trading program.

(7) "CAIR NO<sub>x</sub> allowance" means a limited authorization issued by the department under this chapter, to emit one ton of nitrogen oxides during the specified calendar year for which the authorization is allocated or of any calendar year thereafter under the CAIR NO<sub>x</sub> program. Unless otherwise qualified, the term means a CAIR NO<sub>x</sub> annual allowance and a CAIR NO<sub>x</sub> ozone season allowance.

(8) "CAIR NO<sub>x</sub> annual allowance" means a limited authorization issued by the department under this chapter, to emit one ton of nitrogen oxides during a calendar year for which the authorization is allocated or during a calendar year of any calendar year thereafter under the CAIR NO<sub>x</sub> annual trading program.

(9) "CAIR NO<sub>x</sub> annual trading program" means a multi-state nitrogen oxides air pollution control and emission reduction program established by the administrator in accordance with this chapter, 40 CFR 97 subparts AA to HH and 40 CFR 51.123(p) and 52.35, as a means of mitigating interstate transport of fine particulates and nitrogen oxides.

(10) "CAIR NO<sub>x</sub> ozone season allowance" means a limited authorization issued by the department under this chapter, to emit one ton of nitrogen oxides during an ozone season for which the

authorization is allocated or during an ozone season of any calendar year thereafter under the CAIR NO<sub>x</sub> ozone season trading program or a limited authorization issued by a permitting authority for a control period during 2003 through 2008 under the NO<sub>x</sub> budget trading program in accordance with 40 CFR 51.121(p) to emit one ton of nitrogen oxides during a control period, provided that the provision in 40 CFR 51.121(b)(2)(ii)(E) of this chapter may not be used in applying this definition and the limited authorization may not have been used to meet the allowance-holding requirement under the NO<sub>x</sub> budget trading program.

(11) "CAIR NO<sub>x</sub> ozone season trading program" means a multi-state nitrogen oxides air pollution control and emission reduction program established by the administrator in accordance with this chapter, 40 CFR 97 subparts AAAA through HHHH and 40 CFR 51.123(ee) and 52.35, as a means of mitigating interstate transport of ozone and nitrogen oxides.

(12) "CAIR NO<sub>x</sub> source" means a source that includes one or more CAIR NO<sub>x</sub> units.

(13) "CAIR NO<sub>x</sub> unit" means a unit that is subject to the CAIR NO<sub>x</sub> annual trading program under 40 CFR 97.104 and the CAIR NO<sub>x</sub> ozone trading program under 40 CFR 97.304.

(14) "CAIR renewable unit" means an installed and operational electric generating facility, located in this state, commencing operation on or after January 1, 2001 that either:

(a) Generates renewable energy serving a generator with nameplate capacity greater than 25 MWe.

(b) Consists of units combined pursuant to s. 299.83, Stats., serving generators with combined nameplate capacity of greater than 25 MWe.

(15) "Coal-fired" means combusting any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel, during a specified year.

(16) "Cogeneration unit" has the meaning given in s. NR 409.02(21).

(17) "Combustion turbine" means an enclosed device comprising a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through

the turbine, rotating the turbine. If the enclosed device is combined cycle, the combustion turbine includes any associated duct burner, heat recovery steam generator, and steam turbine.

(18) "Commence commercial operation" means, with regard to a unit:

(a) To have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation, except as provided in 40 CFR 97.105, 97.184(h), 97.304 or 97.384(h).

1. For a unit that is a CAIR NO<sub>x</sub> unit under 40 CFR 97.104 or 97.304 on the later of November 15, 1990 or the date the unit commences commercial operation as defined in par. (a) (intro.) and that subsequently undergoes a physical change, other than replacement of the unit by a unit at the same source, the date shall remain the date of commencement of commercial operation of the unit, which shall continue to be treated as the same unit.

2. For a unit that is a CAIR NO<sub>x</sub> unit under 40 CFR 97.104 or 97.304 on the later of November 15, 1990 or the date the unit commences commercial operation as defined in par. (a) (intro.) and that is subsequently replaced by a unit at the same source, e.g., repowered, the date shall remain the replaced unit's date of commencement of commercial operation, and the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in par. (a) (intro.) or (b) (intro.) as appropriate.

(b) Notwithstanding par. (a) (intro.) and except as provided in 40 CFR 97.105 or 97.305, for a unit that is not a CAIR NO<sub>x</sub> unit under 40 CFR 97.104 or 97.304 on the later of November 15, 1990 or the date the unit commences commercial operation as defined in par. (a) (intro.), the unit's date for commencement of commercial operation shall be the date on which the unit becomes a CAIR NO<sub>x</sub> unit under 40 CFR 97.104 or 97.304.

1. For a unit with a date for commencement of commercial operation as defined in par. (b) (intro.) and that subsequently undergoes a physical change, other than replacement of the unit by a unit at the same source, the date shall remain the date of commencement of commercial operation of the unit, which

shall continue to be treated as the same unit.

2. For a unit with a date for commencement of commercial operation as defined in par. (b) (intro.) and that is subsequently replaced by a unit at the same source, e.g., repowered, the date shall remain the replaced unit's date of commencement of commercial operation, and the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in par. (a) (intro.) or (b) (intro.) as appropriate.

(19) "Conventional resource" means a resource that derives energy from coal, oil, nuclear power or natural gas. However, a fuel cell that derives energy from natural gas is not a conventional resource.

(20) "Generator" means a device that produces electricity.

(21) "Gross electrical output" means the total electrical output from an electrical generating unit before making any deductions for the energy output used in any way to produce the energy.

(22) "Heat input" means, with regard to a specified period of time, the product, in mmBtu/time, of the gross calorific value of the fuel, in Btu/lb, divided by 1,000,000 Btu/mmBtu and multiplied by the fuel feed rate into a combustion device, in lb of fuel/time, as measured, recorded, and reported to the administrator by the CAIR designated representative and determined by the administrator in accordance with 40 CFR 97 subpart HH and excluding the heat derived from preheated combustion air, recirculated flue gases, or exhaust from other sources.

(23) "Heat input rate" means the amount of heat input, in mmBtu, divided by unit operating time, in hr, or, with regard to a specific fuel, the amount of heat input attributed to the fuel, in mmBtu, divided by the unit operating time in hr during which the unit combusts the fuel.

(24) "MWh" means megawatt hours.

(25) "Nameplate capacity" means, starting from the initial installation of a generator, the maximum electrical generating output, in MWe, that the generator is capable of producing on a steady state basis and during continuous operation, when not restricted by seasonal or other deratings, as of the installation as specified by the manufacturer of the generator or, starting from the completion of any

subsequent physical change in the generator resulting in an increase in the maximum electrical generating output, in MWe, that the generator is capable of producing on a steady state basis and during continuous operation, when not restricted by seasonal or other deratings, the increased maximum amount as of the completion as specified by the person conducting the physical change.

(26) "Operator" means any person who operates, controls, or supervises a CAIR NO<sub>x</sub> unit or a CAIR NO<sub>x</sub> source and shall include, but not be limited to, any holding company, utility system, or plant manager of a unit or source.

(27) "Owner" means any of the following persons:

(a) Any holder of any portion of the legal or equitable title in a CAIR NO<sub>x</sub> unit at the source or the CAIR NO<sub>x</sub> unit.

(b) Any holder of a leasehold interest in a CAIR NO<sub>x</sub> unit at the source or the CAIR NO<sub>x</sub> unit.

(c) Any purchaser of power from a CAIR NO<sub>x</sub> unit at the source or the CAIR NO<sub>x</sub> unit under a life-of-the-unit, firm power contractual arrangement; provided that, unless expressly provided for in a leasehold agreement, owner may not include a passive lessor, or a person who has an equitable interest through the lessor, whose rental payments are not based, either directly or indirectly, on the revenues or income from the CAIR NO<sub>x</sub> unit.

(28) "Renewable energy" means electricity derived from a renewable resource.

(29) "Renewable resource" means any of the following:

(a) A resource that derives electricity from any of the following:

1. A fuel cell that uses a renewable fuel, as determined by the public service commission.
2. Wave action.
3. Solar thermal electric or photovoltaic energy.
4. Wind power.
5. Geothermal technology.
6. Biomass.

(b) A resource that derives electricity from hydroelectric power other than nuclear power.

(c) Any other resource, except a conventional resource, that the public service commission has designated as a renewable resource in rules promulgated under s. 196.378(4), Stats.

(30) "Repowered" means, with regard to a unit, replacement of a coal-fired boiler with one of the following coal-fired technologies at the same source as the coal-fired boiler:

(a) Atmospheric or pressurized fluidized bed combustion.

(b) Integrated gasification combined cycle.

(c) Magnetohydrodynamics.

(d) Direct and indirect coal-fired turbines.

(e) Integrated gasification fuel cells.

(f) As determined by the administrator in consultation with the secretary of energy, a derivative of one or more of the technologies under pars. (a) to (e) and any other coal-fired technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of January 1, 2005.

(31) "Solid waste incineration unit" means a stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine that is a "solid waste incineration unit" as defined in section 129(g)(1) of the Clean Air Act (42 USC 7429(g)(1)).

(32) "Unit" has the meaning given in s. NR 409.02(82).

(33) "Useful thermal energy" means, with regard to a cogeneration unit, thermal energy that is either:

(a) Made available to an industrial or commercial process, not a power production process, excluding any heat contained in condensate return or makeup water.

(b) Used in a heating application, such as space heating or hot water heating.

(c) Used in space cooling application, such as thermal energy used by an absorption chiller.

(34) "Utility power distribution system" means the portion of an electricity grid owned or operated by a utility and dedicated to delivering electricity to customers.

**NR 432.03 CAIR NO<sub>x</sub> annual allowance allocation.** The department shall use the procedures in this section for calculating and allocating NO<sub>x</sub> annual allowances for CAIR NO<sub>x</sub> units and CAIR renewable units.

(1) UNIT BASELINES. (a) The department shall calculate the baseline energy output of each CAIR NO<sub>x</sub> unit and each CAIR renewable unit, in MWh according to the following equations as appropriate:

1. For a CAIR NO<sub>x</sub> unit that is a cogeneration unit and that has operated for 5 or more consecutive calendar years, by using one of the following equations:

a. Use equation 1a if the unit is the only unit serving a generator or, if more than one unit serves the same generator and unit-level data for equation 1a is available for all units:

$$B = GE_{avg} + \left( \frac{TE_{avg}}{3.4} \right) \quad \text{Equation 1a}$$

where:

B is the unit baseline energy output made available by the cogeneration unit in MWh

GE<sub>avg</sub> is the average of the 3 highest annual amounts of the unit's annual gross electric output in MWh over the 5 year period identified in par. (b)

TE<sub>avg</sub> is the average of the 3 highest annual amounts of the unit's annual useful thermal energy in mmBtu over the 5 year period identified in par. (b)

3.4 is a conversion factor in MWh/mmBtu

b. Use equation 1b if more than one unit serves the same generator and unit-level data for equation 1a is not available for all units:

$$B_i = \left( GE_{Gen} + \frac{TE_T}{3.4} \right) \times \left( \frac{NC_i}{\sum_{j=1}^n NC_j} \right) \quad \text{Equation 1b}$$

where:

$B_i$  is the baseline energy output made available by cogeneration unit  $i$  in MWh

$GE_{Gen}$  is the average of the 3 highest annual amounts of the annual gross electric output in MWh for the generator served over the 5 year period identified in par. (b)

$TE_T$  is the average of the 3 highest annual amounts of annual useful thermal energy in mmBtu for the generator served over the 5 year period defined in par. (b)

3.4 is a conversion factor in MWh/mmBtu

$NC_i$  is the nameplate capacity of unit  $i$

$n$  is the number of units serving the same generator

2. For a CAIR  $NO_x$  unit that is not a cogeneration unit and that has operated for 5 or more consecutive calendar years and for a CAIR renewable unit that has operated for 5 or more consecutive calendar years, by using one of the following equations as appropriate:

a. Use equation 2a if the unit is the only unit serving a generator or, if more than one unit serves the same generator and unit-level data for equation 2a is available for all units:

$$B = GE_{avg} \quad \text{Equation 2a}$$

where:

$B$  is the unit baseline energy output made available by the CAIR  $NO_x$  unit or the CAIR renewable unit in MWh

$GE_{avg}$  is the average of the 3 highest annual amounts of the unit's annual gross electric output in MWh over the 5 year period identified in par. (b)

b. Use equation 2b if more than one unit serves the same generator and unit-level data for equation 2a is not available for all units:

$$B_i = GE_{Gen} \times \left( \frac{NC_i}{\sum_{j=1}^n NC_j} \right) \quad \text{Equation 2b}$$

where:

$B_i$  is the baseline energy output made available by CAIR NO<sub>x</sub> unit i or CAIR renewable unit i in MWh

$GE_{Gen}$  is the average of the 3 highest annual amounts of the annual gross electric output in MWh for the generator served over the 5 year period identified in par. (b)

$NC_i$  is the nameplate capacity of unit i

n is the number of units serving the same generator

(b) 1. In 2007, the department shall calculate the unit baseline for each CAIR NO<sub>x</sub> unit for 2009 to 2014 using data for the years 2000 to 2004.

2. In 2011, the department shall calculate the unit baseline for each CAIR NO<sub>x</sub> unit and each CAIR renewable unit for 2015 to 2019 using the most recent 5 calendar years of data.

3. In 2016, and every fifth year thereafter, the department shall calculate the unit baseline for each CAIR NO<sub>x</sub> unit and each CAIR renewable unit for the next 5 year period using the most recent 5 calendar years of data.

(c) If a unit is retired in any year after 2008, the department shall calculate the unit's baseline by using the operating data for the most recent 5 calendar years until the unit has no operating data for the most recent 5 year period.

**Note: Retired unit baseline example** A unit is retired in 2010. In 2011, unit baselines are updated using 2005-2009 annual data. The retired unit would receive all allowances based upon its unit baseline for 2005-2009 operating data even though it is no longer operating. In 2016, the next unit baseline updating year, the baseline for the unit would be determined using the most recent 5 years of data – 2010 through 2014. If the unit had some operating data in 2010, it would receive minimal allowances in 2015 to 2019 based on the amount of electrical generation in 2010 until the next unit baseline update but would not have any operational data or allowances in 2020 or thereafter.

(d) In performing the unit baseline calculations under pars. (a) to (c), the department shall use data provided by EPA. If the required data is unavailable from the EPA, the department shall request the required data directly from the unit's CAIR designated representative. If the representative does not provide data within 60 days of the department's request, the department shall estimate the unit's baseline energy output using best available data.

(1m) STATE BASELINE. (a) Prior to 2011, the department shall establish the state baseline by summing the unit baselines calculated according to sub. (1) for all CAIR NO<sub>x</sub> units listed in Table 1.

(b) In 2011 and annually thereafter, the department shall calculate an annual state baseline by summing the unit baselines calculated according to sub. (1) for all CAIR NO<sub>x</sub> units and all CAIR renewable units.

(2) ALLOWANCE ALLOCATION FOR EXISTING UNITS. (a) In 2009 and annually thereafter, the department shall allocate to all CAIR NO<sub>x</sub> units and CAIR renewable units for which a unit baseline has been calculated under sub. (1), a total amount of CAIR NO<sub>x</sub> annual allowances equal to 93% of the tons of NO<sub>x</sub> emissions in the trading budget for Wisconsin in 40 CFR 97.140.

(b) The department shall allocate CAIR NO<sub>x</sub> annual allowances to each unit in an amount determined by equation 3:

$$A_i = MAP \times \left( \frac{B_i}{\sum_{j=1}^k B_j} \right) \quad \text{Equation 3}$$

where:

$A_i$  is the annual allocation of CAIR NO<sub>x</sub> annual allowances for unit  $i$  rounded to the nearest whole ton

MAP is the main allocation pool of CAIR NO<sub>x</sub> annual allowances in tons which is the trading budget for Wisconsin in 40 CFR 97.140, minus the new unit set-aside established in sub. (3)

$B_i$  is the unit baseline established under sub. (1) for unit  $i$

$k$  is the number of all CAIR NO<sub>x</sub> units and all CAIR renewable units

(3) ALLOCATIONS FOR NEW UNITS. In 2009 and annually thereafter, the department shall allocate CAIR NO<sub>x</sub> annual allowances to CAIR NO<sub>x</sub> units for which a request is received under par. (b) and that commenced operation on or after January 1, 2001 and for which a baseline energy output cannot be determined under sub. (1), in accordance with the following procedures:

(a) For 2009 and each year thereafter, the department shall establish a new unit set-aside consisting of all CAIR NO<sub>x</sub> annual allowances available for new units in that year. The new unit set-aside in each year shall be equal to 7% of the amount of tons of NO<sub>x</sub> emissions in the trading budget under 40 CFR 97.140 for Wisconsin.

(b) The CAIR designated representative of a CAIR NO<sub>x</sub> unit that commenced operation on or after January 1, 2001, may submit to the department a request to be allocated CAIR NO<sub>x</sub> annual allowances under this subsection, starting with 2009 or the first calendar year after the calendar year in which the CAIR NO<sub>x</sub> unit commences commercial operation, whichever is later, and until the first calendar year for which the unit is eligible for and is allocated CAIR NO<sub>x</sub> annual allowances under sub.

(2). The CAIR NO<sub>x</sub> annual allocation request shall be submitted on or before May 1 of the first calendar year for which the CAIR NO<sub>x</sub> annual allowances are requested and after the date on which the CAIR NO<sub>x</sub> unit commences commercial operation.

(c) In a CAIR NO<sub>x</sub> annual allocation request under par. (b), the CAIR designated representative may not request CAIR NO<sub>x</sub> annual allowances exceeding the CAIR NO<sub>x</sub> unit's total tons of NO<sub>x</sub> emissions during the calendar year immediately before the calendar year of the request.

(d) The department shall review each CAIR NO<sub>x</sub> annual allocation request submitted under par. (b) and allocate CAIR NO<sub>x</sub> annual allowances for each calendar year as follows:

1. The department shall establish the maximum amount of new unit set-aside CAIR NO<sub>x</sub> annual allowances a unit is eligible for based upon a request submitted under par. (b).

2. On or after July 31 of each calendar year, the department shall determine the sum of all CAIR NO<sub>x</sub> annual allowances established under subd. 1. for all new units in the calendar year.

3. If the amount of CAIR NO<sub>x</sub> annual allowances in the new unit set-aside for the calendar year under par. (a) is greater than or equal to the sum determined under subd. 2., the department shall allocate the amount of CAIR NO<sub>x</sub> annual allowances determined under subd. 1. to each CAIR NO<sub>x</sub> unit for which an allocation request was submitted.

4. If the amount of the CAIR NO<sub>x</sub> annual allowances in the new unit set-aside for the calendar year under par. (a) is less than the sum determined under subd. 2., the department shall allocate to each CAIR NO<sub>x</sub> unit for which the department established a maximum amount under subd. 1. greater than zero, an amount determined using equation 4:

$$N_i = R_i \times \left( \frac{NUSA}{\sum_{j=1}^k R_j} \right) \quad \text{Equation 4}$$

where:

$N_i$  is the annual allocation of annual set-aside allowances for new unit  $i$  for the calendar year rounded to the nearest whole ton

$R_i$  is the amount of CAIR  $\text{NO}_x$  annual allowances the department determined unit  $i$  is eligible for under subd. 1.

NUSA is the new unit set-aside established under par. (a)

$k$  is the number of units for which the department established an amount greater than 0 under subd. 1.

(e) The department shall notify each CAIR designated representative that submitted an allocation request under par. (b) of the amount of CAIR  $\text{NO}_x$  annual allowances allocated for the calendar year to the CAIR  $\text{NO}_x$  unit covered by the request.

(4) ALLOCATION OF REMAINING NEW UNIT SET-ASIDE ALLOWANCES. After completion of the procedures under sub. (3), any CAIR  $\text{NO}_x$  annual allowances remaining in the new unit set-aside for the calendar year shall be allocated to the CAIR  $\text{NO}_x$  units that were allocated CAIR  $\text{NO}_x$  annual allowances under sub. (2) for the calendar year in an amount determined using equation 5:

$$X_i = U \times \left( \frac{A_i}{MAP} \right) \quad \text{Equation 5}$$

where:

$X_i$  is the allocation of remaining new unit set-aside annual allowances for unit  $i$  rounded to the nearest whole ton

$U$  is the amount of unallocated new unit set-aside allowances in tons

$A_i$  is the annual allocation of CAIR  $\text{NO}_x$  annual allowances for unit  $i$  calculated using equation 3

$MAP$  is the main allocation pool of CAIR  $\text{NO}_x$  annual allowances in tons which is the trading budget for Wisconsin in 40 CFR 97.140 minus the new unit set-aside established in sub. (3)

(5) CAIR NO<sub>x</sub> ANNUAL ALLOCATIONS FOR 2009-2014. The CAIR NO<sub>x</sub> annual allocations for 2009 to 2014 for individual CAIR NO<sub>x</sub> units are listed in Table 1.

**Table 1**  
**CAIR NO<sub>x</sub> Annual Allocations for 2009 to 2014 by CAIR NO<sub>x</sub> Unit**  
(in tons of CAIR NO<sub>x</sub> allowances)

Unit Location		2009	2010	2011	2012	2013	2014
Alma	B4	692	692	692	692	692	692
Alma	B5	703	703	703	703	703	703
Bay Front	1	79	79	79	79	79	79
Bay Front	2	70	70	70	70	70	70
Bay Front	5	109	109	109	109	109	109
Blackhawk	3	8	8	8	8	8	8
Blackhawk	4	7	7	7	7	7	7
Blount Street	3	5	5	5	5	5	5
Blount Street	5	7	7	7	7	7	7
Blount Street	6	9	9	9	9	9	9
Blount Street	7	71	71	71	71	71	71
Blount Street	8	168	168	168	168	168	168
Blount Street	9	194	194	194	194	194	194
Blount Street	11	2	2	2	2	2	2
Columbia	1	3061	3061	3061	3061	3061	3061
Columbia	2	2944	2944	2944	2944	2944	2944
Concord	1	12	12	12	12	12	12
Concord	2	14	14	14	14	14	14
Concord	3	11	11	11	11	11	11
Concord	4	10	10	10	10	10	10
Depere Energy Center	B01	124	124	124	124	124	124
Edgewater (4050)	3	338	338	338	338	338	338
Edgewater (4050)	4	1576	1576	1576	1576	1576	1576
Edgewater (4050)	5	2136	2136	2136	2136	2136	2136
French Island	3	4	4	4	4	4	4
French Island	4	4	4	4	4	4	4
Genoa	1	1793	1793	1793	1793	1793	1793
Germantown Power Plant	1	4	4	4	4	4	4
Germantown Power Plant	2	3	3	3	3	3	3
Germantown Power Plant	3	5	5	5	5	5	5
Germantown Power Plant	4	4	4	4	4	4	4
Germantown Power Plant	5	25	25	25	25	25	25
J P Madgett	B1	1900	1900	1900	1900	1900	1900
Manitowoc	6	96	96	96	96	96	96
Manitowoc	7	117	117	117	117	117	117
Manitowoc	8	129	129	129	129	129	129
Neenah Energy Facility	CT01	100	100	100	100	100	100

Neenah Energy Facility	CT02	101	101	101	101	101	101
Nelson Dewey	1	517	517	517	517	517	517
Nelson Dewey	2	510	510	510	510	510	510
Paris	1	17	17	17	17	17	17
Paris	2	21	21	21	21	21	21
Paris	3	22	22	22	22	22	22
Paris	4	15	15	15	15	15	15
Pleasant Prairie	1	3528	3528	3528	3528	3528	3528
Pleasant Prairie	2	3578	3578	3578	3578	3578	3578
Port Washington Generating Station	1	220	220	220	220	220	220
Port Washington Generating Station	2	192	192	192	192	192	192
Port Washington Generating Station	3	223	223	223	223	223	223
Pulliam	3	101	101	101	101	101	101
Pulliam	4	123	123	123	123	123	123
Pulliam	5	268	268	268	268	268	268
Pulliam	6	379	379	379	379	379	379
Pulliam	7	470	470	470	470	470	470
Pulliam	8	765	765	765	765	765	765
Rock River	1	116	116	116	116	116	116
Rock River	2	95	95	95	95	95	95
Rock River	5	14	14	14	14	14	14
Rock River	6	21	21	21	21	21	21
Sheepskin	1	1	1	1	1	1	1
South Fond Du Lac	CT1	29	29	29	29	29	29
South Fond Du Lac	CT2	24	24	24	24	24	24
South Fond Du Lac	CT3	18	18	18	18	18	18
South Fond Du Lac	CT4	14	14	14	14	14	14
South Oak Creek	5	1173	1173	1173	1173	1173	1173
South Oak Creek	6	1200	1200	1200	1200	1200	1200
South Oak Creek	7	1618	1618	1618	1618	1618	1618
South Oak Creek	8	1630	1630	1630	1630	1630	1630
Valley (WEPCO)	1	224	224	224	224	224	224
Valley (WEPCO)	2	224	224	224	224	224	224
Valley (WEPCO)	3	224	224	224	224	224	224
Valley (WEPCO)	4	224	224	224	224	224	224
West Marinette	31	10	10	10	10	10	10
West Marinette	32	10	10	10	10	10	10
West Marinette	33	77	77	77	77	77	77
West Marinette	34	47	47	47	47	47	47
Weston	1	323	323	323	323	323	323
Weston	2	535	535	535	535	535	535
Weston	3	2017	2017	2017	2017	2017	2017
Weston	32	22	22	22	22	22	22
Wheaton	1	9	9	9	9	9	9

Wheaton	2	9	9	9	9	9	9
Wheaton	3	9	9	9	9	9	9
Wheaton	4	9	9	9	9	9	9
Wheaton	5	9	9	9	9	9	9
Wheaton	6	9	9	9	9	9	9
Whitewater Cogeneration Facility	1	379	379	379	379	379	379

**NR 432.04 Compliance supplement pool.** In addition to the CAIR NO<sub>x</sub> annual allowances allocated under s. NR 432.03, the department may allocate for calendar year 2009 additional allowances from the compliance supplement pool up to the amount designated by the EPA in 40 CFR 97.143 for the purposes identified in this section.

(1) EARLY REDUCTION CREDITS. (a) The department may allocate CAIR NO<sub>x</sub> annual allowances from the compliance supplement pool to an electric generating unit if the unit's CAIR designated representative demonstrates that it achieved early reductions of NO<sub>x</sub> emissions. To be eligible for early reduction credits, the unit's CAIR designated representative shall demonstrate all of the following:

1. The CAIR NO<sub>x</sub> unit's average annual NO<sub>x</sub> emission rate for 2007 or 2008 is less than 0.15 lb/mmBtu based on heat input.

2. If the unit is included in a NO<sub>x</sub> averaging plan under s. NR 409.065(7) for 2007 or 2008, the NO<sub>x</sub> averaging plan has an actual weighted average NO<sub>x</sub> emission rate for 2007 or 2008 equal to or less than the actual weighted average NO<sub>x</sub> emission rate for preceding year.

3. Compared to the preceding year, the CAIR NO<sub>x</sub> unit achieves NO<sub>x</sub> emission reductions in both 2007 and 2008.

(b) The CAIR designated representative of the unit may request early reduction credits, and allocation of CAIR NO<sub>x</sub> annual allowances from the compliance supplement pool for early reduction credits, in accordance with the following:

1. The CAIR designated representative shall report the NO<sub>x</sub> emissions rate and the heat input of the unit based on monitoring data required in accordance with 40 CFR part 97, subpart HH in each calendar year for which early reduction credit is requested.

2. The CAIR designated representative of a CAIR NO<sub>x</sub> unit shall submit to the department by July 31, 2009 a request for allocation of an amount of CAIR NO<sub>x</sub> annual allowances from the compliance supplement pool. The request may not exceed the value determined using equation 6:

$$ER = \frac{(HI_{2007} \times \Delta EM_{2007}) + (HI_{2008} \times \Delta EM_{2008})}{2000} \quad \text{Equation 6}$$

where:

ER is the amount of CAIR NO<sub>x</sub> annual allowances a CAIR designated representative may request based on early emission reductions in 2007 and 2008 rounded to the nearest ton

HI<sub>2007</sub> is the total heat input to the unit for the calendar year 2007 in mmBtu

HI<sub>2008</sub> is the total heat input to the unit for the calendar year 2008 in mmBtu

2000 is a conversion factor in lb/ton

ΔEM<sub>2007</sub> and ΔEM<sub>2008</sub> are the differences between the actual emission rates for 2007 and 2008 respectively and the target emission rate for early reductions in lbs NO<sub>x</sub>/mmBtu. If the unit's actual average emission rate for the calendar year is greater than 0.15, ΔEM<sub>year</sub> is calculated using equation 7. If the unit's actual average emission rate for the calendar year is equal to or less than 0.15, ΔEM<sub>year</sub> equals 1.

$$\Delta EM_{year} = Actual_{year} - 0.15 \quad \text{Equation 7}$$

where:

Actual<sub>year</sub> is the unit's actual average emission rate for calendar year for 2007 or 2008 in lbs NO<sub>x</sub>/mmBtu determined in accordance with 40 CFR part 97 subpart HH

0.15 is the target emission rate for early reductions in lbs NO<sub>x</sub>/mmBtu

(2) ELECTRIC RELIABILITY. The department may allocate CAIR NO<sub>x</sub> annual allowances from the compliance supplement pool to any CAIR NO<sub>x</sub> unit for which the unit's CAIR designated representative demonstrates that compliance with the CAIR NO<sub>x</sub> allocation under s. NR 432.03, Table 1 for calendar year 2009 would create an undue risk to the reliability of electricity supply during 2009. The CAIR designated representative of the unit may request the allocation of CAIR NO<sub>x</sub> annual allowances from the compliance supplement pool in order to avoid an undue risk to the reliability of electricity supply during 2009 in accordance with the following:

(a) The CAIR designated representative of the CAIR NO<sub>x</sub> unit shall submit to the department by July 31, 2009 a request for allocation of an amount of CAIR NO<sub>x</sub> annual allowances from the compliance supplement pool not exceeding the minimum amount of CAIR NO<sub>x</sub> annual allowances necessary to remove the undue risk to the reliability of electricity supply.

(b) In the request under par. (a), the CAIR designated representative of the CAIR NO<sub>x</sub> unit shall demonstrate that, in the absence of allocation to the unit of the amount of CAIR NO<sub>x</sub> annual allowances requested, the unit's compliance with CAIR NO<sub>x</sub> allocation under s. NR 432.03, Table 1 for calendar year 2009 would create an undue risk to the reliability of electricity supply during that year. This demonstration shall include a showing by the unit's CAIR designated representative that it would not be feasible to do both of the following:

1. Obtain a sufficient amount of electricity from other electricity generation facilities for compliance with the CAIR NO<sub>x</sub> allocations under s. NR 432.03, Table 1 to prevent the undue risk.

2. Obtain under subs. (1) and (3), or otherwise obtain, a sufficient amount of CAIR NO<sub>x</sub> annual allowances to prevent the undue risk.

(3) ALLOCATION PROCEDURE. The department shall review each request submitted under subs. (1) and (2) and shall allocate CAIR NO<sub>x</sub> annual allowances for calendar year 2009 to CAIR NO<sub>x</sub> units covered by the requests as follows:

(a) Upon receipt of each request, the department shall determine whether the amount of the CAIR NO<sub>x</sub> annual allowances requested from the compliance supplement pool meets the requirements of sub. (1) or (2).

(b) If the amount of CAIR NO<sub>x</sub> annual allowances in the compliance supplement pool is greater than or equal to the total amount of CAIR NO<sub>x</sub> annual allowances in all requests submitted under subs. (1) and (2), the department shall allocate to each CAIR NO<sub>x</sub> unit covered by the requests the amount of CAIR NO<sub>x</sub> annual allowances requested, and determined eligible for under par. (a).

(c) If the state's compliance supplement pool has a smaller amount of CAIR NO<sub>x</sub> annual allowances than the total amount of CAIR NO<sub>x</sub> annual allowances in all requests submitted under subs. (1) and (2), as adjusted under par. (a), the department shall allocate CAIR NO<sub>x</sub> annual allowances to each CAIR NO<sub>x</sub> unit covered by such requests according to equation 8:

$$Z_i = Y_i \times \left( \frac{CSP}{\sum_{j=1}^k Y_j} \right) \quad \text{Equation 8}$$

where:

$Z_i$  is the amount of CAIR NO<sub>x</sub> annual allowances allocated to unit  $i$  from the state's compliance supplement pool rounded to the nearest whole ton

$Y_i$  is the amount of CAIR NO<sub>x</sub> annual allowances requested for unit  $i$  under subs. (1) and (2), as determined eligible under par. (a)

CSP is the amount of CAIR NO<sub>x</sub> annual allowances in the state's compliance supplement pool as provided in 40 CFR 97.143

$k$  is the number of units which the department deemed eligible for requests made under subs. (1) and (2)

(d) By November 15, 2009, the department shall determine the allocations under par. (b) or (c), as applicable. The department shall make available to the public each determination of CAIR NO<sub>x</sub> annual allowances under par. (c) and shall provide an opportunity for submission of objections to the determination. Objections shall be limited to addressing whether the determination is in accordance with sub. (1) or (2) and par. (b) or (c) and data correction. Based on any objections, the department may adjust each determination to the extent necessary to ensure that it is in accordance with sub. (1) or (2) and par. (b) or (c) and the data is correct.

(e) By December 15, 2009, the department shall notify the administrator of the allocations made under par. (d).

**NR 432.05 CAIR NO<sub>x</sub> ozone season allowance allocation.** The department shall use the procedures in this section for calculating and allocating NO<sub>x</sub> ozone season allowances for CAIR NO<sub>x</sub> units and CAIR renewable units.

(1) UNIT BASELINES. (a) The department shall calculate the baseline energy output of each CAIR NO<sub>x</sub> unit and each CAIR renewable unit, in MWh according to the following equations as appropriate:

1. For a CAIR NO<sub>x</sub> unit that is a cogeneration unit and that has operated for 5 or more consecutive calendar years, by using one of the following equations:

a. Use equation 9a if the unit is the only unit serving a generator or, if more than one unit serves the same generator and unit-level data for equation 9a is available for all units:

$$B = GE_{avg} + \left( \frac{TE_{avg}}{3.4} \right) \quad \text{Equation 9a}$$

where:

B is the unit baseline energy output made available by the cogeneration unit in MWh

$GE_{avg}$  is the average of the 3 highest annual amounts of the unit's ozone season gross electric output in MWh over the 5 year period identified in par. (b)

$TE_{avg}$  is the average of the 3 highest annual amounts of the unit's ozone season useful thermal energy in mmBtu over the 5 year period identified in par. (b)

3.4 is a conversion factor in MWh/mmBtu

b. Use equation 9b if more than one unit serves the same generator and unit-level data for equation 9a is not available for all units:

$$B_i = \left( GE_{Gen} + \frac{TE_T}{3.4} \right) \times \left( \frac{NC_i}{\sum_{j=1}^n NC_j} \right) \quad \text{Equation 9b}$$

where:

$B_i$  is the baseline energy output made available by cogeneration unit i in MWh

$GE_{Gen}$  is the average of the 3 highest annual amounts of the ozone season gross electric output in MWh for the generator served over the 5 year period identified in par. (b)

$TE_T$  is the average of the 3 highest annual amounts of ozone season useful thermal energy in mmBtu for the generator served over the 5 year period defined in par. (b)

3.4 is a conversion factor in MWh/mmBtu

$NC_i$  is the nameplate capacity of unit i

n is the number of units serving the same generator

2. For a CAIR  $NO_x$  unit that is not a cogeneration unit and that has operated for 5 or more consecutive calendar years and a CAIR renewable unit that has operated for 5 or more consecutive calendar years, by using one of the following equations as appropriate:

a. Use equation 10a if the unit is the only unit serving a generator or, if more than one unit serves the same generator and unit-level data for equation 10a is available for all units:

$$B = GE_{avg} \quad \text{Equation 10a}$$

where:

B is the unit baseline energy output made available by the CAIR NO<sub>x</sub> unit or the CAIR renewable unit in MWh

GE<sub>avg</sub> is the average of the 3 highest annual amounts of the unit's ozone season gross electric output in MWh over the 5 year period identified in par. (b)

b. Use equation 10b if more than one unit serves the same generator and unit-level data for equation 10a is not available for all units:

$$B_i = GE_{Gen} \times \left( \frac{NC_i}{\sum_{j=1}^n NC_j} \right) \quad \text{Equation 10b}$$

where:

B<sub>i</sub> is the baseline energy output made available by CAIR NO<sub>x</sub> unit i or CAIR renewable unit i in MWh

GE<sub>Gen</sub> is the average of the 3 highest annual amounts of the ozone season gross electric output in MWh for the generator served over the 5 year period identified in par. (b)

NC<sub>i</sub> is the nameplate capacity of unit i

n is the number of units serving the same generator

(b) 1. In 2007, the department shall calculate the unit baseline for each CAIR NO<sub>x</sub> unit for 2009 to 2014 using ozone season data for the years 2000 to 2004.

2. In 2011, the department shall calculate the unit baseline for each CAIR NO<sub>x</sub> unit and each CAIR renewable unit for 2015 to 2019 using the most recent 5 calendar years of ozone season data.

3. In 2016, and every fifth year thereafter, the department shall calculate the unit baseline for each CAIR NO<sub>x</sub> unit and each CAIR renewable unit for the next 5 year period using the most recent 5 calendar years of ozone season data.

(c) If a unit is retired in any year after 2008, the department shall calculate the unit's baseline by using the ozone season operating data for the most recent 5 calendar years until the unit has no operating data for the most recent 5 year period.

**Note: Retired unit baseline example** A unit is retired in 2010. In 2011, unit baselines are updated using 2005-2009 ozone season data. The retired unit would receive all allowances based upon its unit baseline for 2005-2009 ozone season operating data even though it is no longer operating. In 2016, the next unit baseline updating year, the baseline for the unit would be determined using the most recent 5 years of data – 2010 through 2014. If the unit had some operating data in the 2010, it would receive minimal allowances in 2015 to 2019 based on the amount of electrical generation in 2010 ozone season until the next unit baseline update but would not have any operational data or allowances for 2020 or thereafter.

(d) In performing the unit baseline calculations under pars. (a) to (c), the department shall use data provided by EPA. If the required data is unavailable from the EPA, the department shall request the required data directly from the unit's CAIR designated representative. If the representative does not provide data within 60 days of the department's request, the department shall estimate the unit's baseline energy output using best available data.

(1m) STATE BASELINE. (a) Prior to 2011, the department shall establish the state baseline by summing the unit baselines calculated according to sub. (1) for all CAIR NO<sub>x</sub> units listed in Table 2.

(b) In 2011 and annually thereafter, the department shall calculate an annual state baseline by summing the unit baselines calculated according to sub. (1) for all CAIR NO<sub>x</sub> units and all CAIR renewable units.

(2) ALLOWANCE ALLOCATION FOR EXISTING UNITS. (a) In 2009 and annually thereafter, the department shall allocate to all CAIR NO<sub>x</sub> units and CAIR renewable units for which a unit baseline has been calculated under sub. (1), a total amount of CAIR NO<sub>x</sub> ozone season allowances equal to 93% of the tons of NO<sub>x</sub> emissions in the trading budget for Wisconsin in 40 CFR 97.340.

(b) The department shall allocate CAIR NO<sub>x</sub> ozone season allowances to each unit in an amount determined by equation 11:

$$A_i = MAP \times \left( \frac{B_i}{\sum_{j=1}^k B_j} \right) \quad \text{Equation 11}$$

where:

A<sub>i</sub> is the annual allocation of CAIR NO<sub>x</sub> ozone season allowances for unit i rounded to the nearest whole ton

MAP is the main allocation pool of CAIR NO<sub>x</sub> ozone season allowances in tons which is the trading budget for Wisconsin in 40 CFR 97.340, minus the new unit set-aside established in sub. (3)

B<sub>i</sub> is the unit baseline established under sub. (1) for unit i

k is the number of all CAIR NO<sub>x</sub> units and all CAIR renewable units

(3) ALLOCATIONS FOR NEW UNITS. In 2009 and annually thereafter, the department shall allocate CAIR NO<sub>x</sub> ozone season allowances to CAIR NO<sub>x</sub> units for which a request is received under par. (b) and that commenced operation on or after January 1, 2001 and for which a baseline energy output cannot be determined under sub. (1), in accordance with the following procedures:

(a) For 2009 and each year thereafter, the department shall establish a new unit set-aside consisting of all CAIR NO<sub>x</sub> ozone season allowances available for new units in that year. The new unit

set-aside in each year shall be equal to 7% of the amount of tons of NO<sub>x</sub> emissions in the trading budget under 40 CFR 97.340 for Wisconsin.

(b) The CAIR designated representative of a CAIR NO<sub>x</sub> unit that commenced operation on or after January 1, 2001, may submit to the department a request to be allocated CAIR NO<sub>x</sub> ozone season allowances under this subsection, starting with 2009 or the first calendar year after the calendar year in which the CAIR NO<sub>x</sub> unit commences commercial operation, whichever is later, and until the first calendar year for which the unit is eligible for and is allocated CAIR NO<sub>x</sub> ozone season allowances under sub. (2). The CAIR NO<sub>x</sub> ozone season allocation request shall be submitted on or before May 1 of the first calendar year for which the CAIR NO<sub>x</sub> ozone season allowances are requested and after the date on which the CAIR NO<sub>x</sub> unit commences commercial operation.

(c) In a CAIR NO<sub>x</sub> ozone season allocation request under par. (b), the CAIR designated representative may not request CAIR NO<sub>x</sub> ozone season allowances exceeding the CAIR NO<sub>x</sub> unit's total tons of NO<sub>x</sub> emissions during the ozone season immediately before the calendar year of the request.

(d) The department shall review each CAIR NO<sub>x</sub> ozone season allocation request submitted under par. (b) and allocate CAIR NO<sub>x</sub> ozone season allowances for each calendar year as follows:

1. The department shall establish the maximum amount of new unit set-aside CAIR NO<sub>x</sub> ozone season allowances a unit is eligible for based upon a request submitted under par. (b).

2. On or after July 31 of each calendar year, the department shall determine the sum of all CAIR NO<sub>x</sub> ozone season allowances established under subd. 1. for all new units in the calendar year.

3. If the amount of CAIR NO<sub>x</sub> ozone season allowances in the new unit set-aside for the calendar year under par. (a) is greater than or equal to the sum determined under subd. 2., the department shall allocate the amount of CAIR NO<sub>x</sub> ozone season allowances determined under subd. 1. to each CAIR NO<sub>x</sub> unit for which an allocation request was submitted.

4. If the amount of the CAIR NO<sub>x</sub> ozone season allowances in the new unit set-aside for the calendar year under par. (a) is less than the sum determined under subd. 2., the department shall allocate

to each CAIR NO<sub>x</sub> unit for which the department established a maximum amount under subd. 1., greater than zero, an amount determined using equation 12:

$$N_i = R_i \times \left( \frac{NUSA}{\sum_{j=1}^k R_j} \right) \quad \text{Equation 12}$$

where:

N<sub>i</sub> is the annual allocation of ozone season set-aside allowances for new unit i for the calendar year rounded to the nearest whole ton

R<sub>i</sub> is the amount of CAIR NO<sub>x</sub> ozone season allowances the department determined unit i is eligible for under subd. 1.

NUSA is the new unit set-aside established under par. (a)

k is the number of units for which the department established an amount greater than 0 under subd. 1.

(e) The department shall notify each CAIR designated representative that submitted an allocation request under par. (b) of the amount of CAIR NO<sub>x</sub> ozone season allowances allocated for the calendar year to the CAIR NO<sub>x</sub> unit covered by the request.

(4) ALLOCATION OF REMAINING NEW UNIT SET-ASIDE ALLOWANCES. After completion of the procedures under sub. (3), any CAIR NO<sub>x</sub> ozone season allowances remaining in the new unit set-aside for the calendar year shall be allocated to the CAIR NO<sub>x</sub> units that were allocated CAIR NO<sub>x</sub> ozone season allowances under sub. (2) for the calendar year in an amount determined using equation 13:

$$X_i = U \times \left( \frac{A_i}{MAP} \right) \quad \text{Equation 13}$$

where:

$X_i$  is the allocation of remaining new unit set-aside ozone season allowances for unit  $i$  rounded to the nearest whole ton

$U$  is the amount of unallocated new unit set-aside allowances

$A_i$  is the annual allocation of CAIR  $\text{NO}_x$  ozone season allowances for unit  $i$  calculated using equation 11

MAP is the main allocation pool of CAIR  $\text{NO}_x$  ozone season allowances in tons which is the trading budget for Wisconsin in 40 CFR 97.340 minus the new unit set-aside established in sub. (3)

(5) CAIR  $\text{NO}_x$  OZONE SEASON ALLOCATIONS FOR 2009-2014. The CAIR  $\text{NO}_x$  ozone season allocations for 2009 to 2014 for individual CAIR  $\text{NO}_x$  units are listed in Table 2.

**Table 2**  
**CAIR  $\text{NO}_x$  Ozone Season Allocations for 2009 to 2014 by CAIR  $\text{NO}_x$  Unit**  
(in tons of CAIR  $\text{NO}_x$  allowances)

Unit Location		2009	2010	2011	2012	2013	2014
Alma	B4	277	277	277	277	277	277
Alma	B5	283	283	283	283	283	283
Bay Front	1	33	33	33	33	33	33
Bay Front	2	31	31	31	31	31	31
Bay Front	5	46	46	46	46	46	46
Blackhawk	3	4	4	4	4	4	4
Blackhawk	4	3	3	3	3	3	3
Blount Street	3	3	3	3	3	3	3
Blount Street	5	4	4	4	4	4	4
Blount Street	6	5	5	5	5	5	5
Blount Street	7	31	31	31	31	31	31
Blount Street	8	75	75	75	75	75	75
Blount Street	9	90	90	90	90	90	90
Blount Street	11	1	1	1	1	1	1
Columbia	1	1397	1397	1397	1397	1397	1397
Columbia	2	1376	1376	1376	1376	1376	1376
Concord	1	8	8	8	8	8	8
Concord	2	9	9	9	9	9	9
Concord	3	7	7	7	7	7	7
Concord	4	8	8	8	8	8	8

Depere Energy Center	B01	61	61	61	61	61	61
Edgewater (4050)	3	148	148	148	148	148	148
Edgewater (4050)	4	735	735	735	735	735	735
Edgewater (4050)	5	956	956	956	956	956	956
French Island	3	2	2	2	2	2	2
French Island	4	2	2	2	2	2	2
Genoa	1	752	752	752	752	752	752
Germantown Power Plant	1	2	2	2	2	2	2
Germantown Power Plant	2	1	1	1	1	1	1
Germantown Power Plant	3	2	2	2	2	2	2
Germantown Power Plant	4	2	2	2	2	2	2
Germantown Power Plant	5	15	15	15	15	15	15
J P Madgett	B1	820	820	820	820	820	820
Manitowoc	6	34	34	34	34	34	34
Manitowoc	7	34	34	34	34	34	34
Manitowoc	8	34	34	34	34	34	34
Neenah Energy Facility	CT01	61	61	61	61	61	61
Neenah Energy Facility	CT02	59	59	59	59	59	59
Nelson Dewey	1	233	233	233	233	233	233
Nelson Dewey	2	227	227	227	227	227	227
Paris	1	12	12	12	12	12	12
Paris	2	14	14	14	14	14	14
Paris	3	15	15	15	15	15	15
Paris	4	10	10	10	10	10	10
Pleasant Prairie	1	1533	1533	1533	1533	1533	1533
Pleasant Prairie	2	1583	1583	1583	1583	1583	1583
Port Washington Generating Station	1	107	107	107	107	107	107
Port Washington Generating Station	2	103	103	103	103	103	103
Port Washington Generating Station	3	110	110	110	110	110	110
Pulliam	3	45	45	45	45	45	45
Pulliam	4	53	53	53	53	53	53
Pulliam	5	113	113	113	113	113	113
Pulliam	6	153	153	153	153	153	153
Pulliam	7	220	220	220	220	220	220
Pulliam	8	312	312	312	312	312	312
Rock River	1	51	51	51	51	51	51
Rock River	2	53	53	53	53	53	53
Rock River	5	6	6	6	6	6	6
Rock River	6	9	9	9	9	9	9
Sheepskin	1	1	1	1	1	1	1
South Fond Du Lac	CT1	16	16	16	16	16	16
South Fond Du Lac	CT2	14	14	14	14	14	14
South Fond Du Lac	CT3	10	10	10	10	10	10
South Fond Du Lac	CT4	7	7	7	7	7	7

South Oak Creek	5	544	544	544	544	544	544
South Oak Creek	6	510	510	510	510	510	510
South Oak Creek	7	681	681	681	681	681	681
South Oak Creek	8	731	731	731	731	731	731
Valley (WEPCO)	1	95	95	95	95	95	95
Valley (WEPCO)	2	95	95	95	95	95	95
Valley (WEPCO)	3	95	95	95	95	95	95
Valley (WEPCO)	4	95	95	95	95	95	95
West Marinette	31	4	4	4	4	4	4
West Marinette	32	4	4	4	4	4	4
West Marinette	33	33	33	33	33	33	33
West Marinette	34	20	20	20	20	20	20
Weston	1	136	136	136	136	136	136
Weston	2	231	231	231	231	231	231
Weston	3	843	843	843	843	843	843
Weston	32	19	19	19	19	19	19
Wheaton	1	4	4	4	4	4	4
Wheaton	2	4	4	4	4	4	4
Wheaton	3	4	4	4	4	4	4
Wheaton	4	4	4	4	4	4	4
Wheaton	5	4	4	4	4	4	4
Wheaton	6	4	4	4	4	4	4
Whitewater Cogeneration Facility	1	153	153	153	153	153	153

**NR 432.06 Timing requirements for CAIR NO<sub>x</sub> allowance allocations.** (1) ALLOCATIONS FOR 2009-2014. By April 30, 2007 or within 30 days after the effective date of this chapter ...[revisor insert date], the department shall notify the administrator of the CAIR NO<sub>x</sub> allocations for 2009 to 2014 for the units listed in Tables 1 and 2.

(2) ALLOCATIONS FOR 2015 AND LATER YEARS. (a) By July 31, 2011 and July 31 of each year thereafter, the department shall determine the CAIR NO<sub>x</sub> allocations, in accordance with ss. NR 432.03(1) and (2) and 432.05(1) and (2), which shall apply to CAIR NO<sub>x</sub> units and CAIR renewable units in the 4th year after the determination.

**Note:** For example, in 2011, the department shall determine the allocations applicable in 2015 and in 2012, allocations for 2016.

(b) By October 31, 2011 and October 31 of each year thereafter, the department shall notify the administrator of each unit's allocation of CAIR NO<sub>x</sub> allowances under par. (a) for the fourth year after the year of the notification.

(3) ALLOCATIONS FOR NEW UNITS. (a) By July 31, 2009 and July 31 of each year thereafter, the department shall determine the CAIR NO<sub>x</sub> allocations, in accordance with ss. NR 432.03(1), (3) and (4) and 432.05(1), (3) and (4), for the year of the applicable determination under this section.

(b) By October 31, 2009 and October 31 of each year thereafter, the department shall notify the administrator of each unit's allocation of CAIR NO<sub>x</sub> allowances under par. (a) for the year of the notification.

(4) PUBLIC COMMENTS. The department shall make available to the public each determination of CAIR NO<sub>x</sub> allowances under sub. (1), (2) or (3) and shall provide an opportunity for submission of objections to the determination. Objections shall be limited to addressing whether the determination is in accordance with ss. NR 432.03 and 432.05. Based on any objections, the department may adjust each determination to the extent necessary to ensure that it is in accordance with ss. NR 432.03 and 432.05.

**NR 432.07 Superior environmental performance.** (1) The voluntary activities listed in this section constitute superior environmental performance as defined in s. 299.83(1)(g), Stats., for participation in Tier II of the environmental results program under s. 299.83, Stats.:

(a) Agreeing never to use a specified amount of CAIR NO<sub>x</sub> allowances.

(b) Agreeing not to use a specified amount of CAIR NO<sub>x</sub> allowances prior to a specified future year.

(c) Agreeing to reduce emissions of other pollutants such as sulfur dioxides, mercury, carbon dioxide or heavy metals beyond levels required by federal and state laws.

(2) The level of environmental benefit provided by an entity that agrees to never use or to defer the use of a specified amount of CAIR NO<sub>x</sub> allowances shall be based on the number of CAIR NO<sub>x</sub> allowances involved and the number of years in which the allowances may not be used.

(3) The environmental benefit provided by the reduction of emissions of pollutants other than NO<sub>x</sub> shall be based on the types of pollutants reduced and the amount of reduction beyond federal and state requirements.

(4) In the context of a participation contract negotiated under the authority of s. 299.83(6), Stats., reductions in recordkeeping, reporting or other administrative requirements related to environmental regulations may be appropriate incentives for the activities described in sub. (1). The amount of flexibility provided shall be proportional to the environmental benefits provided by the participant.

SECTION 2. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2) (intro.), Stats.

SECTION 3. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on \_\_\_\_\_.

Dated at Madison, Wisconsin \_\_\_\_\_.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
Scott Hassett, Secretary

(SEAL)