

US EPA ARCHIVE DOCUMENT



## Summary of the Clear Skies Act of 2003

The Clear Skies Act of 2003 (Clear Skies Act) amends Title IV of the Clean Air Act to establish new cap-and-trade programs requiring reductions of sulfur dioxide, nitrogen oxides, and mercury emissions from electric generating facilities and amends Title I of the Clean Air Act to provide an alternative regulatory classification for units subject to the cap-and-trade programs.

- ! Common Provisions: The Clear Skies Act establishes a new Part A, which contains the program elements shared by the sulfur dioxide, nitrogen oxides, and mercury programs. A cap-and-trade program will be implemented for each pollutant. Common definitions, allowance system procedures, monitoring, permitting and compliance requirements, penalties for non-compliance, opt-ins and auction procedures apply to the new trading programs and are modeled largely after the existing Acid Rain Program.
- " Under Section 403, the Administrator must establish an allowance system for sulfur dioxide, nitrogen oxide, and mercury that is essentially the same as in the existing Acid Rain Program but that provides for a safety valve, i.e., a direct sale of allowances by the Administrator at a fixed price for use in meeting the requirement to hold allowances at least equal to annual emissions.
- " Under Section 404, the new trading programs must be reflected in Title V permits. This is similar to the permitting provisions of the existing Acid Rain Program.
- " Under Section 405, affected units must meet essentially the same type of continuous emission monitoring and reporting requirements under the new trading programs as under the Acid Rain Program.
- " Under Section 406, a graduated, automatic excess emissions penalty replaces the existing single, automatic penalty under the Acid Rain Program.
- " Under Section 407, fossil fuel-fired boilers, combustion turbines, and integrated gasification combined cycle plants that are not otherwise subject to the new sulfur dioxide, nitrogen oxides, and mercury trading programs may opt into these program if certain requirements are met. Once a unit opts into the new trading programs, it cannot withdraw.
- " Section 408 is the same as existing Title IV section 415, which addresses the Department of Energy's Clean Coal Technology Program.
- " Section 409 requires the Administrator to promulgate regulations for auctions of allowances under the new sulfur dioxide, nitrogen oxides, and mercury trading programs. All auction proceeds will go to the general Treasury.
- " Section 410 establishes criteria and the process by which the Administrator may recommend to Congress adjustment of the total amounts of allowances available (whether through allocation or auction) starting in 2018 under the new sulfur dioxide, nitrogen oxides, and mercury trading programs.
- ! Sulfur Dioxide Emissions Reductions: The Clear Skies Act establishes Part B, which retains in sections 411 - 419, with few changes, the relevant requirements of the existing Acid Rain Program through

December 31, 2009 and contains in sections 421 - 434 the new, lower annual caps on total sulfur dioxide emissions and new allocation procedures starting January 1, 2010.

" Under Section 421, the new sulfur dioxide trading program covers units in the U.S. and its territories. The program includes existing fossil fuel-fired electricity generating boilers, combustion turbines, and integrated gasification combined cycle plants with generators having a nameplate capacity of greater than 25 MW with certain exceptions for cogeneration units. The program also includes new fossil fuel-fired electricity generating boilers, combustion turbines, and integrated gasification combined cycle plants regardless of size, except for gas-fired units serving one or more generators with total nameplate capacity of 25 MW or less and certain new cogeneration units. In addition, solid waste incineration units and units for treatment, storage, or disposal of hazardous waste are exempted.

" Under Section 422, compliance with the requirement to hold allowances covering sulfur dioxide emissions in the new trading program will be determined on a facility-wide basis. The owner or operator must hold allowances for all the affected units at a facility at least equal to the total sulfur dioxide emissions for those units during the year.

" Under Section 423, annual sulfur dioxide emissions for affected units are capped at 4.5 million tons starting in 2010 and 3.0 million tons starting in 2018. During the first year of the program, 99% of the allowances will be allocated to affected units with an auction for the remaining 1%. Each subsequent year, an additional 1% of the allowances for twenty years, and then an additional 2.5% thereafter, will be auctioned until eventually all the allowances are auctioned.

" Under Section 424, allowances are allocated to affected units previously receiving allowances under the Acid Rain Program based on their proportion of the total post-2009 Acid Rain sulfur dioxide allowances currently recorded in their Acid Rain Program allowance accounts. Units that received no allocations under the Acid Rain Program are allocated allowances based on the product of their baseline heat input and a standard emission rate reflective of fuel type. If the Administrator does not promulgate final allocation regulations on a timely basis, the Administrator will use a default method that allocates allowances based on the proposed allocation regulations. In the absence of any proposed allocation regulations, the Administrator will use a second default method to allocate 95% of the allowances on the basis of heat input data, with an auction for the remaining 5%.

" Under Section 425, once the Administrator places sulfur dioxide allowances under the new trading program into accounts in the Allowance Tracking System, all year 2010 and later allowances allocated under the Acid Rain Program will be removed from the accounts. All pre-2010 allowances under the Acid Rain Program that have not been used will remain in accounts and may be used to meet the requirement to hold allowances in the new trading program.

" Under Section 426, a reserve of 250,000 allowances is established for affected units that combusted bituminous and that, before 2010, install and operate sulfur dioxide control technology and continue to combust such coal. The procedure established for submission of applications by owners and operators and approval of applications and award of allowances by the Administrator is designed to ensure that approval of those projects will result in the largest amount of sulfur dioxide emission reductions achieved per allowance awarded.

" Under Sections 431 - 434, a separate emission limitation and cap-and-trade program are provided for the States in the Western Regional Air Partnership (WRAP). The cap-and-trade

program for the WRAP States goes into effect the third year after the year 2018 or later when sulfur dioxide emissions for these units exceed 271,000 tons. This cap-and-trade program is analogous to the new nation-wide sulfur dioxide trading program but establishes a second, independent sulfur dioxide emission limitation only for these WRAP units, which would be subject to both the regional and the nationwide programs.

- ! Nitrogen Oxides Emissions Reductions: The Clear Skies Act establishes Part C, which retains in sections 441 - 442 the requirements of the existing Acid Rain Program for nitrogen oxides and in sections 461 - 465 the requirements of the existing NOx State Implementation (SIP) Call under Section 110 of the Clean Air Act through December 31, 2007; and contains in sections 451 - 454 the new, annual caps on total allowances and new, allocation procedures starting January 1, 2008.
- " Under Section 451, the new nitrogen oxides trading program covers the same units in the U.S. and its territories as the new sulfur dioxide trading program, but separate cap-and-trade systems are established for Zone 1 (largely the Eastern and part of the central portions of the U.S.) and Zone 2 (the remainder of the U.S. and territories).
- " Under Section 452, compliance with the requirement to hold allowances covering nitrogen oxides emissions will be determined on a facility-wide basis, analogous to the way compliance is determined under the new sulfur dioxide trading programs. Only allowances issued for the zone in which the facility is located can be used for compliance for that facility.
- " Under Section 453, annual nitrogen oxides emissions for affected units in Zone 1 are capped at 1.562 million tons starting in 2008 and 1.162 million tons starting in 2018. Zone 2 annual emissions are capped at 538,000 tons. Each year, the percentages of allowances allocated and auctioned are the same as under the new sulfur trading program.
- " Under Section 454, allowances are allocated to affected units based on the proportionate share of their baseline heat input to total heat input of the units in their respective zone. If the Administrator does not promulgate final allocations on a timely basis, a default provision, like that under the new sulfur dioxide trading program, takes effect.
- " Sections 461 - 465 contains provisions that codify the emission reduction requirements of the NOx SIP Call that covers the Eastern U.S. The SIPs are required to be consistent with the nitrogen oxides emission budgets established under the NOx SIP Call. SIPs must be submitted for certain full States and for certain portions of some States, as determined by the Administrator in a rulemaking that commenced February 22, 2002. Section 463 specifies that sources covered by the new sulfur dioxide, nitrogen oxides, or mercury trading programs are no longer subject to NOx SIP Call requirements, including the seasonal emissions cap, beginning in 2008. Further, this section establishes procedures under which the owner or operator of a unit subject to the NOx SIP Call may petition the Administrator to use, for compliance for 2004, nitrogen oxides allowances allocated for 2005. The petition must demonstrate that the owner or operator made reasonable efforts to install appropriate control technology and that there is an undue risk for electric supply reliability.
- ! Mercury Emissions Reductions: The Clear Skies Act establishes Part D, which contains the new, annual caps on total mercury allowances and new, allocation procedures starting January 1, 2010.
- " Under Section 471, the new mercury trading program covers coal-fired units that are covered by the new sulfur dioxide and nitrogen oxides trading programs.
- " Under Section 472, compliance with the requirement to hold allowances covering mercury

emissions will be determined on a facility-wide basis, analogous to the way compliance is determined under the new sulfur dioxide and nitrogen oxides trading programs.

- " Under Section 473, annual mercury emissions are capped at 26 tons starting in 2010 and 15 tons starting in 2018. Each year, the percentages of allowances allocated and auctioned are the same as under the new sulfur and nitrogen oxides trading programs.
- " Under Section 474, allowances are allocated to affected units based on the proportionate share of their baseline heat input to total heat input of all affected units. For purposes of allocating the allowances, each unit's baseline heat input is adjusted to reflect the types of coal combusted by the unit during the baseline period. If the Administrator does not promulgate final allocation regulations on a timely basis, a default provision, like that under the new sulfur dioxide and nitrogen oxides trading programs, takes effect.

- ! Performance Standards for New Sources: To ensure that all new affected units have appropriate controls, Part E establishes, in section 481, performance standards for all new boilers, combustion turbines, and integrated gasification combined cycle plants (IGCCs) covered under the Act.
  - " "New" units are those that commence construction or reconstruction after the date of enactment. The standards also apply to "modified" units that opt to meet the applicable performance standard in lieu of case-specific BACT.
  - " These statutory performance standards include emission limits for four air pollutants: nitrogen oxides; sulfur dioxide; mercury; and particulate matter (PM). The mercury emission limit applies only to coal-fired units. In addition, a PM emission limit is established for existing oil-fired boilers to ensure reductions of nickel from such units. All units subject to a performance standard must monitor emissions using CEMS and use averaging times similar to current NSPS.
  - " Boilers and IGCCs are subject to a sulfur dioxide emission limit of 2.0 lb/MWh; a nitrogen oxides emission limit of 1.0 lb/MWh; and a PM emission limit of 0.20 lb/MWh. Coal-fired boilers and IGCCs are subject to a mercury emission limit of 0.015 lb/GWh; however, alternative standards would apply in some circumstances. Coal-fired combustion turbines are subject to the same nitrogen oxides, sulfur dioxide, PM, and mercury emission limits as coal-fired boilers and IGCCs. Oil-fired combustion turbines are subject to nitrogen oxides emission limits ranging from 0.289 lb/MWh to 1.01 lb/MWh, an sulfur dioxide emission limit of 2.0 lb/MWh, and a PM emission limit of 0.20 lb/MWh. Gas-fired combustion turbines are subject to nitrogen oxides emission limits ranging from 0.084 lb/MWh to 0.56 lb/MWh. Existing oil-fired boilers are subject to a PM emission limit of 0.30 lb/MWh.

- ! Research, Environmental Monitoring, and Assessment: Section 482 contains provisions for evaluating and reporting the efficacy of the new sulfur dioxide, nitrogen oxides, and mercury trading programs; and providing information concerning whether the total amounts of allowances under these programs starting in 2018 should be adjusted under section 410.

- ! Exemption from Major Source Reconstruction Review Requirements and Best Available Retrofit Technology Requirements: Section 483 exempts affected units from the requirements of New Source Review (NSR). The section also exempts these units from the requirement to install best available retrofit technology (BART). These exemptions are created by excluding affected units from being "major stationary sources" for purposes of Part C and D of the Clean Air Act.

- " Affected units constructed after enactment of the Clear Skies Act must meet the performance standards for nitrogen oxides, sulfur dioxide, PM, and carbon monoxide specified in section 481, but a case-by-case review of the appropriate control technology such as BACT or LAER is no longer required. Similarly, modifications at existing affected units must either comply with the performance standards for nitrogen oxides, sulfur dioxide, PM, and carbon monoxide established in section 481 or comply with BACT. However, to qualify for this exemption from NSR, an existing units must either commit within three years to meet the existing NSPS limit for PM of 0.03 lb/mmBtu in the future, or have begun to properly operate any existing control technology to reduce PM emissions or otherwise minimize PM emissions according to best operational practices. To qualify for the exemption, an existing unit must also use good combustion practices to minimize emissions of carbon monoxide. Permits issued in the past to comply with the requirements of Part C and D, however, will remain in effect.
- " To ensure that national parks and other Class I areas are protected, affected units located within 50 km of such an area will remain subject to the requirements in Part C for the protection of such areas.
- " States must ensure that the construction of new or modified affected units will not cause or contribute to a violation of the NAAQS or interfere with the programs to assure that the NAAQS are met. States also must provide the public with an opportunity to comment on the impact of the affected unit on the NAAQS, or on any Class I areas within 50 km of the facility.
- " For affected units, the definition of modification is defined to mean changes that increase the maximum hourly emissions of any air pollutant achievable at the unit during the last 5 years.

! Transitional Areas: Sections 107 and 110 would be modified to authorize EPA to designate as "transitional" areas for which EPA-performed modeling demonstrates that the area will attain the 8-hour ozone or PM<sub>2.5</sub> NAAQS through the controls provided under the legislation. In addition, an area may be classified as transitional if the State performs EPA-approved modeling demonstrating that it will attain the 8-hour ozone or PM<sub>2.5</sub> NAAQS through a combination of reductions achieved through controls established through the legislation and any other federal controls that have been promulgated or local controls that the State adopts and submits with its modeling demonstration.

! Utility MACT Standard: Section 112 would be amended to preclude regulation of the emission of hazardous air pollutants by electric utility steam generating units under section 112. Such standard would be rendered unnecessary by the market-based mercury emission reduction program established by this legislation and the establishment of emission control requirements for existing oil-fired electric utility steam generating units in new section 481 of the legislation. The Administrator would, however, retain authority to address any non-mercury hazardous air pollutants from electricity generating units under existing residual risk authority of section 112(f).

! Restrictions on Transport Requirements for Affected Units: The legislation would limit the applicability of section 126 petitions and the requirements of the section 110(a)(2)(D) state implementation plan (SIP) "good neighbor" provisions.

- " The Act revises section 126 to provide that if any state submits a section 126 petition concerning emissions from an affected unit, the Administrator may not grant any finding prior to January 1, 2009, although the Administrator must take final action during January, 2009 on any petition submitted prior to January 1, 2007. Further, if the Administrator grants a requested

finding, then the Administrator must assure that the compliance and implementation deadlines are extended to beyond December 31, 2011.

- " The Act further requires that in considering the petition, the Administrator must consider, among other factors, any other emissions reductions that would affect the petitioner's air quality by any applicable attainment dates for nonattainment areas. In addition, as conditions for making a finding concerning affected units, the Administrator must determine that the required emissions reductions from the affected units may be reduced at least as cost-effectively as emissions from each other principal category of sources of sulfur dioxide or nitrogen oxides and that reductions in such emissions will improve air quality in the petitioning State's nonattainment area(s) at least as cost-effectively as reductions in emissions from each other principal category of sources to the maximum extent that a methodology is reasonably available to make such a determination. The legislation also directs the Administrator to develop an appropriate peer reviewed methodology for making such determinations.
- " The Act makes corresponding changes in the SIP requirements of section 110(a)(2)(D). The Act further makes clear that these changes do not affect the NOx SIP call, which includes requirements that certain Eastern states revise their SIPs to reduce NOx emissions that exacerbate ozone-smog downwind.

- ! Maintenance of Existing CO<sub>2</sub> Reporting Requirements: Title VIII of the Clean Air Act Amendments of 1990 (miscellaneous provisions) is amended by modifying section 821(a) to retain the existing carbon dioxide monitoring and reporting requirements for units subject to the existing Acid Rain Program.