



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R05-OAR-2018-0072; FRL-10002-81-Region 5]

Air Plan Approval; Illinois; Sulfur Dioxide.

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving a request submitted by the Illinois Environmental Protection Agency (IEPA) on February 6, 2018, to revise the Illinois State Implementation Plan (SIP) under the Clean Air Act (CAA) for the 2010 1-hour sulfur dioxide (SO₂) National Ambient Air Quality Standard (NAAQS). IEPA specifically requested EPA approval to amend the Illinois SIP for the 2010 1-hour SO₂ NAAQS to account for two variances granted by the Illinois Pollution Control Board (IPCB) to Calpine Corporation (Calpine) and Exelon Generation, LLC (Exelon). EPA proposed to approve the state's submittal on June 12, 2019.

DATES: This final rule is effective on **[insert date 30 days after date of publication in the Federal Register]**.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA-R05-OAR-2018-0072. All documents in the docket are listed in the <http://www.regulations.gov> web site. Although listed in the index, some information is not publicly

available, e.g., Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either through <http://www.regulations.gov>, or please contact the person identified in the "For Further Information Contact" section for additional availability information.

FOR FURTHER INFORMATION CONTACT: Francisco J. Acevedo, Mobile Source Program Manager, Control Strategies Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-6061, acevedo.francisco@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, wherever "we", "us" or "our" is used, we mean EPA.

I. What is being addressed by this document?

In conjunction with Illinois' adoption of SO₂ emission limits for major sources, the state adopted rule revisions (Sulfur Content Rule) to limit the sulfur content of distillate and residual fuel oil combusted at stationary sources throughout the state. See 35 Ill. Adm. Code 214.161(b)(2) and 214.305(a)(2). The Sulfur Content Rule specifically requires that the sulfur content of distillate fuel oil combusted on or after January 1, 2017, not exceed 15 parts per million (ppm).

The rule applies to owners and operators of existing fuel combustion emission and process emission sources that burn liquid fuel.

Illinois' Sulfur Content Rule, containing 35 Ill. Adm. Code 214.161(b)(2) and 214.305(a)(2), was submitted to EPA as a SIP revision on March 2, 2016, and EPA issued an approval in the Federal Register on February 1, 2018 (83 FR 4591) and May 29, 2018 (83 FR 24406).

On May 18, 2016, pursuant to Section 35(a) of the Illinois Environmental Protection Act, 415 ILCS 5/34(a), and Part 104 of Title 35 of the Illinois Administrative Code, 35 Ill. Adm. Code 104.100, Exelon filed a Petition for Variance with the IPCB regarding its Byron (Ogle County), Clinton (DeWitt County), Dresden (Grundy County), and LaSalle (LaSalle County) nuclear generation stations. See *Exelon Generation, LLC v. Illinois Environmental Protection Agency*, PCB 16-106. Section 35 of the Illinois Environmental Protection Act provides that the IPCB, under state law, "may grant individual variances . . . whenever it is found, upon presentation of adequate proof, that compliance with any rule or regulation . . . would impose an arbitrary or unreasonable hardship." (IPCB's granting of such a variance under state law, however, does not automatically revise what is federally enforceable under the SIP; only if Illinois submits and EPA approves a SIP revision reflecting the granting

of the variance can the federally enforceable SIP be revised.) Exelon requested temporary relief from the 15 ppm sulfur content limitation for distillate fuel oil set forth in 35 Ill. Adm. Code 214.161(b)(2). On September 8, 2016, the IPCB granted the variance subject to a number of conditions.

On June 16, 2016, Calpine also filed a Petition for Variance with the IPCB regarding the Zion Energy Center. See Calpine Corporation (Zion Energy Center) v. Illinois Environmental Protection Agency, PCB 16-112. On August 8, 2016, Calpine filed an Amended Petition for Variance with the IPCB, requesting temporary relief from the 15 ppm sulfur content limitation for distillate fuel oil set forth in 35 Ill. Adm. Code 214.161(b)(2). On November 17, 2016, the IPCB granted the variance from January 1, 2017, to December 31, 2021, subject to several conditions. IPCB also granted the motion on August 17, 2017, amending its order to correct the errors.

The Petition for Variance sought relief from provisions that were approved into the Illinois SIP. Those SIP provisions remain in effect and enforceable unless and until EPA revises the SIP to incorporate the variances. Thus, following the decision by IEPA to approve the variances, IEPA submitted them to EPA for approval as SIP revisions.

On February 6, 2018, IEPA formally submitted a request for EPA approval to amend the Illinois SIP for the 2010 1-hour SO₂

NAAQS to account for two variances granted by the IPCB to Calpine and Exelon. The submittal included an analysis of the potential impact of the variances on air quality, specifically with respect to the 2010 1-hour SO₂ NAAQS. This analysis was part of the variance applications submitted by Calpine and Exelon to the IPCB.

On June 12, 2019, at 84 FR 27212, EPA proposed to approve IEPA's request to amend the Illinois SIP to reflect the variances granted by the IPCB for Calpine and Exelon.

II. What comments did we receive on the proposed SIP revision?

Our June 12, 2019 proposed rule provided a 30-day comment period. The comment period closed on July 12, 2019. EPA received comments from one party during the public comment period. In this section we are responding to the comments received.

Comment. The commenter generally states that EPA should not approve the variances addressed in the proposal. The commenter specifically notes that the sources' claim that they are economically burdened by the imposition of the state's rule requiring compliance with sulfur limits of no greater than 15 ppm is factually incorrect. In addition, the commenter asserts that the facilities should not be allowed to dilute the 15 ppm fuel with any remaining high sulfur fuel and that they should immediately sell any remaining non-compliant fuel and stop

burning diluted fuel with non-compliant sulfur limits.

Response. As discussed in more detail in the June 12, 2019 proposed approval, both Exelon and Calpine considered several potential options to comply with the Sulfur Content Rule as of January 1, 2017. Such options included combusting all the non-compliant fuel; continuing to dilute the fuel's sulfur content concentrations with ultra-low sulfur diesel (ULSD); draining all the storage tanks and refilling them with ULSD. According to the IPCB, both companies demonstrated that none of the compliance alternatives evaluated were practicable for meeting the 15 ppm sulfur limit by January 1, 2017 and presented a substantial hardship to the companies. EPA agrees with IPCB's evaluation that substantial hardship exists based on review of support documentation provided to the IPCB and included as part of the SIP revision submitted to EPA. Exelon's plan for complying with the Sulfur Content Rule by the end of the variance period outlined by the IPCB calls for continuing to replenish the lower sulfur tanks with ULSD; and, as part of a coordinated program, emptying the higher sulfur tanks and refilling them with ULSD. Under Calpine's compliance plan, the facility would comply with the Sulfur Content Rule by January 1, 2022 by continuing to purchase only fuel with sulfur content below 15 ppm. This ensures that the sulfur content of the fuel used at the facility will continue to decrease. During the

variance period, the sulfur content of all distillate oil combusted by Calpine must not exceed 115 ppm sulfur content. EPA believes that both compliance plans provide enough flexibility to allow Exelon and Calpine to address their hardship concerns while also requiring full compliance with the Sulfur Content Rule at the end of the variance period. The commenter did not submit any specific information for EPA review to substantiate its claim that the companies' hardship concerns were factually incorrect.

In addition, while hardship is a prerequisite for state variance issuance in this case, hardship is not a prerequisite for Federal approval. The state regulation under which it grants variances is not part of the SIP. Hardship is a defensible criterion for the state to use in allocating air quality resources, but it is not a criterion under the CAA, nor is EPA obliged in this case to judge whether it would have made the same determination as the state. EPA here needs only to judge whether the approval of these variances into the SIP interferes with attainment and reasonable further progress or any other applicable CAA requirement.

Comment. The commenter raises concerns that the state did not perform an appropriate CAA section 110(1) analysis to determine what effect these units would have on the 2010 1-hour SO₂ NAAQS. Further, the commenter states that EPA should evaluate

situations when all the engines are being used at the same time since they appear to be emergency units that would likely be turned on at the same time.

Response. Both Exelon and Calpine submitted an analysis of the potential impact of their respective variances on air quality, specifically with regard to the 2010 1-hour SO₂ NAAQS. These analyses were part of the variance applications submitted to the IPCB. In addition, IEPA and EPA independently evaluated the impact of both variances and concluded that the facilities would not contribute to current SO₂ nonattainment areas, and that they would not cause any current attainment area to violate the SO₂ NAAQS. In addition, EPA concluded that the impact of these variances with regards to section 110(1) do not result in emissions increases above the levels of emissions that were in place when EPA designated these counties as attainment/unclassifiable for the 2010 1-hour SO₂ NAAQS, but rather result in deferred emission reductions during the variance period (unachieved emissions reductions). While these variances delay the emission reductions provided by the approved state rule, these reductions are not necessary to achieve attainment in these areas, since EPA concluded that these areas were attaining the standard even before the reductions required by Illinois' rule were to commence. Specifically, as discussed in more detail in the June 12, 2019 proposed approval, EPA

designated all of these counties as attainment/unclassifiable on January 9, 2018, based on monitoring data from 2014 to 2016 and emissions information that predated the January 1, 2017 compliance date of Illinois' fuel sulfur regulation.

The information submitted by the state was sufficient to assess whether the requirements of section 110(1) were met. For the Exelon variance, the potentially affected geographic areas include portions of the four counties in which the Exelon facilities are located. Each of these counties is designated as attainment/unclassifiable for the 2010 1-hour SO₂ NAAQS. This includes Ogle County for Byron Station, LaSalle County for LaSalle Station, Grundy County for Dresden Station and DeWitt County for Clinton Station. The combined backup diesel storage capacity for the four Exelon stations which are part of this variance is 782,668 gallons. Using the maximum capacity of diesel fuel with a worst case 250 ppm sulfur content would result in 1.7 tons of combined unachieved emissions reductions during the variance period (0.443 tons at the Byron station; 0.238 tons at the Clinton station; 0.343 tons at the Dresden station; and 0.342 tons at the LaSalle station). A calculation of expected unachieved emissions reductions based on a more realistic projection, which uses a five-year average annual fuel usage at each station and current sulfur concentrations of the fuel in the pertinent tanks (based on the highest measure sulfur

content fuel in the largest tanks at the Byron, Clinton, and Dresden stations and an average at the LaSalle station), would result in unachieved emissions reductions on a yearly basis during the variance period totaling less than one-tenth of one ton for all the stations combined.

The 2010 1-hour SO₂ NAAQS (or standard) is 75 parts per billion (ppb) based on the "design value" (the three-year average of annual 99th percentile daily maximum 1-hour average concentrations). IEPA maintains fifteen (15) SO₂ air monitors throughout the state. While these monitors are at a substantial distance from the sources that were granted variances, none of the monitors closest to the sources recorded any exceedances of the 75 ppb standard between 2014-2016, the design value timeframe immediately before Illinois implemented its statewide Sulfur Content Rule requirement. The highest 1-hour design value (2014-2016) for the nearest SO₂ monitoring sites to the Exelon sources ranged from 11 ppb to 44 ppb. Also, as stated above, EPA concluded that the impact of this variance with regards to section 110(1) does not result in emissions increases above the levels of emissions that were in place when these counties were designated as attainment/unclassifiable for the 2010 1-hour SO₂ NAAQS, but rather result in unachieved emission reductions that are deferred during the variance period.

For the Calpine variance, the backup distillate oil in the

tank at the Zion Energy Center would allow for approximately 68.6 hours of turbine operation or approximately 22.8 hours for each of the three combustion turbines at the facility. Using the remaining distillate oil with 115 ppm sulfur content would result in actual unachieved emissions of 0.77 tons of SO₂ over the five-year term of the variance, or 0.15 tons per year. The modeling conducted for this variance to demonstrate the environmental impact of using distillate oil with 115 ppm sulfur content shows that the air quality in potentially impacted areas will remain far below the 2010 1-hour SO₂ NAAQS, and the facility will not cause a modeled NAAQS exceedance.

The nearest SO₂ monitoring sites to Calpine did not record any exceedances in 2013 (IEPA 2013) when Calpine had a permitted sulfur limit of 480 ppm. The highest 1-hour monitored value in 2013 for those sites are 14 ppb and 10 ppb (36.7 ug/m³ and 26.2 ug/m³). Calpine is also approximately 90 kilometers from the nearest nonattainment area for the 2010 1-hour SO₂ NAAQS, Lemont (AQS ID 17-031-16010). Based on available air quality modeling results, Calpine is not contributing to these monitors.

The commenter is concerned about the possibility that all of the backup generators being granted variances might operate simultaneously. Given the distances between the different affected facilities, air quality near any one of these facilities would not reflect any detectable impact from any

level of operation of pertinent SO₂ sources at any of the other affected facilities. The more germane question is whether full simultaneous usage of the variance by the affected units at any one of these facilities would cause air quality concerns. The available information demonstrates that these areas are attaining by sufficient margin and the impact of these variances is sufficiently small that these variances would not interfere with attainment or any other CAA requirement.

Comment. The commenter does not believe the variances should be approved because the Round 3 SO₂ designations did not account for these units burning non-compliant sulfur fuel. The commenter believes that if these units were to turn on all at the same time near a Round 3 or Round 4 SO₂ designation source, the 2010 1-hour SO₂ NAAQS could be violated. EPA must affirmatively determine whether this is a possibility and whether the sources could contribute to a violation of a 2010 1-hour SO₂ NAAQS.

Response. In fact, the Round 3 SO₂ designations did account for these emissions. These designations were based on actual emissions in these areas. While the variances authorize the affected sources to defer any decrease in emissions as soon as would otherwise be required, the designation reflects available evidence indicating that the areas were attaining the standard even before the emission reductions from Illinois' low sulfur fuel oil rule took effect in these areas.

All the facilities that received these variances from IPCB are located in separate counties that were designated by EPA as attainment/unclassifiable for the 2010 1-hour SO₂ NAAQS during the Round 3 SO₂ designations process. As part of its evaluation of the variances, IEPA examined the locations of the affected facilities in comparison to areas that were investigated and modeled for future area designation recommendations (Round 2 and Round 3 SO₂ designations process), and found that there was no overlap; IEPA determined, and EPA concurs, that it did not believe that the facilities associated with these variances would impact potential future nonattainment areas or change the designation for any of the counties where the facilities are located. Because of their relatively low SO₂ contribution levels, none of the facilities were required by EPA's SO₂ Data Requirement Rule (DRR) to be discretely modeled during the Round 3 SO₂ designations process. However, EPA designated the pertinent counties as attainment unclassifiable on the basis of 2014 to 2016 monitored air quality data and emissions information, reflecting air quality before the January 1, 2017 compliance date for Illinois' fuel sulfur regulation. The variances do not change this assessment because their impact does not result in emissions increases above the levels of emissions that were in place during the Round 3 designations process, but rather result in unachieved emission reductions

that are deferred during the variance period. As outlined earlier, the design value for the closest monitors to the facilities are sufficiently below the 2010 1-hour SO₂ NAAQS and even assuming that the combined deferred emissions reduction of 2.47 tons were to be considered an emission increase and were to occur at one time, it would not trigger a violation of the 2010 1-hour SO₂ NAAQS. In addition, the impact of these variances is minimized by the fact the all the facilities are located outside of each other facility's reasonable modeling domain and would not have the potential to cause any significant concentration gradients within an area of analysis.

Regarding Round 4 SO₂ designations, Illinois installed and began operation of a new monitoring network near a pair of DRR sources in Macon County by January 1, 2017. Under a court-ordered designation schedule, EPA is required by December 31, 2020, to designate this area (Macon County) using three years (2017-2019) of quality-assured data to be collected from this network. None of the Exelon and Calpine units that are part of this variance request are in Macon County or are within the reasonable modeling domain and would not have the potential to cause any significant concentration gradients within the area of analysis.

Comment. The commenter states that even if EPA believes the variance is appropriate, EPA should instead require the affected

facilities to utilize the non-compliant fuel first using a "first in, first out" method, so that the non-compliant fuel is used up faster, thereby reducing the time it takes for the facilities to come into compliance with the state rule and the SIP. The commenter further states that EPA should require the facilities to use up any non-compliant fuel first without dilution so that the time in non-compliance is limited and any violation of the SIP and state law is limited to a short time period.

Response. Requiring the affected facilities to utilize non-compliant fuel using a "first in, first out" method is not practicable in this situation because of the number of tanks that are affected; the location of these tanks in the facilities; and because of the legal and contractual restrictions that require both companies to maintain a specified volume of fuel on hand. In Exelon's case, the Nuclear Regulatory Commission regulations require that the facilities store and maintain on-site enough fuel to power the emergency equipment for up to seven days and ensure nuclear safety. As the fuel is depleted, Exelon is obligated to replenish the tanks to maintain the required seven-day supply, which would result in burning compliant fuel, as well as non-compliant fuel. In addition, Exelon indicates that the Federally Enforceable State Operating Permits for the facilities restrict the usage of, and

emissions from, the emergency equipment. Similarly, some of the equipment is subject to Federal New Source Performance Standards for "Stationary Compression Ignition Internal Combustion Engines" (40 CFR Part 60, Subpart IIII) and the National Emission Standards for Hazardous Air Pollutants for "Stationary Reciprocating Internal Combustion Engines" (40 CFR part 63, subpart ZZZZ), which also restrict the amount of time the emergency equipment can be operated.

In Calpine's case, the company is contractually obligated to maintain 12 hours of backup fuel in case of emergency, so draining the tanks would violate this obligation and risk public safety. In its hardship assessment, Calpine argued that it cannot combust all its distillate oil without violating its Clean Air Act Permit Program permit that was reissued on October 16, 2014 (ID NO. 097200ABB, Application No. 99110042). Under its permit, the facility may only combust distillate oil for limited purposes including when natural gas is unavailable or for shakedown, evaluation, and testing of the turbines. Therefore, the facility's permit and economic conditions prevented burning the entire supply of the distillate oil supply before January 1, 2017. Additionally, Calpine argues that draining the storage tanks would impose a substantial hardship. Draining the tanks would entail purchasing and installing new equipment and revising facility plans that safeguard fuel spills

at a substantial cost. As part of their variance agreement, both Exelon and Calpine are required to fully comply with the Sulfur Content Rule and will incur the costs necessary to achieve compliance. The companies only seek additional time to comply with the requirements of the Sulfur Content Rule within their current regulatory and contractual framework.

III. What action is EPA taking?

EPA is approving the revision to the Illinois SIP submitted by the IEPA on February 6, 2018, because the variances granted by the IPCB for Calpine and Exelon meet all applicable requirements and would not interfere with attainment of the 2010 1-hour SO₂ NAAQS.

IV. Incorporation by Reference

In this rule, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of the IPCB Opinion and Orders of the Board described in the amendments to 40 CFR part 52 set forth below. EPA has made, and will continue to make, these documents generally available through www.regulations.gov, and/or at the EPA Region 5 Office (please contact the person identified in the "For Further Information Contact" section of this preamble for more information). Therefore, these materials have been approved by EPA for inclusion in the SIP, have been incorporated

by reference by EPA into that plan, are fully federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of EPA's approval, and will be incorporated by reference in the next update to the SIP compilation.¹

V. Statutory and Executive Order Reviews.

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;

¹ 62 FR 27968 (May 22, 1997).

- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally

permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court

of Appeals for the appropriate circuit by **[insert date 60 days after date of publication in the Federal Register]**. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2) of the CAA.)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control,
Incorporation by reference, Sulfur oxides.

Dated: November 20, 2019.

Cathy Stepp,
Regional Administrator, Region 5.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

2. In § 52.720 the table in paragraph (d) is amended by adding entries in alphabetical order for “Calpine Corporation (Zion Energy Center)” and “Exelon Generation, LLC” to read as follows:

§ 52.720 Identification of plan.

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(d) * * *

EPA--APPROVED ILLINOIS SOURCE-SPECIFIC REQUIREMENTS

Name of source	Order/permit No.	State effective date	EPA approval date	Comments
* * *	* * *	* * *	* * *	* * *
Calpine Corporation (Zion Energy Center)	PCB 16-112	12/19/2016	[insert date of publication in the Federal Register], [insert Federal Register citation]	As amended on 8/17/2017
* * *	* * *	* * *	* * *	* * *
Exelon Generation, LLC	PCB 16-106	9/13/2016	[insert date of publication in the Federal Register], [insert Federal Register citation]	
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