

ILLINOIS POLLUTION CONTROL BOARD  
June 20, 2019

IN THE MATTER OF: )  
 )  
AMENDMENTS TO 35 ILL. ADM. CODE ) R18-20  
225.233, MULTI-POLLUTANT STANDARD ) (Rulemaking - Air)  
(MPS) )

Proposed Rule. Second Notice.

OPINION AND ORDER OF THE BOARD (by K. Papadimitriu):

Today the Board proposes, for second notice, revised amendments to the Multi-Pollutant Standard (MPS) based on the testimony and comments received since second first notice publication. The MPS is a set of air pollution control rules in 35 Ill. Adm. Code 225 (“Control of Emissions from Large Combustion Sources”). At second first notice, the Board adopted a proposal that differed from the Illinois Environmental Protection Agency’s (IEPA) original proposal by: reducing the annual mass caps for both SO<sub>2</sub> and NO<sub>x</sub>; and requiring further reduction of those caps when units are permanently shutdown (“retired”) or temporarily shutdown (“mothballed”). The second first notice rule lowered the proposed annual mass-based caps for SO<sub>2</sub> from 55,000 tons per year (tpy) to 44,920 tpy and for NO<sub>x</sub> from 25,000 tpy to 22,469 tpy. The Board retained the originally-proposed ozone season NO<sub>x</sub> mass-based cap of 11,500 tons. Additionally, as with transfers of power plants under the IEPA’s original proposal, the Board’s second first notice rule reduced the annual SO<sub>2</sub> and NO<sub>x</sub> mass caps when units are retired or mothballed.

Based on this rulemaking record, the Board proposes amendments to the MPS rule for second notice review with the Joint Committee on Administrative Rules. The Board incorporates the amendments suggested by the IEPA in its testimony and comments. The IEPA proposed mass-based caps of 34,500 tpy for SO<sub>2</sub> and 19,000 tpy for NO<sub>x</sub>, while retaining the 11,500 tons for NO<sub>x</sub> for the ozone season. The amendments also: require reduction of at least 2,000 megawatts (MW) of electric generation by coal-fired EGUs in the MPS no later than December 31, 2019; adjust the allocation amounts for transfers, permanent shutdown, and temporary shutdown; and clarify the language of the rule. The Board finds that these amendments are economically reasonable and technically feasible.

In this opinion, the Board first provides procedural history (pp. 1), next the Board provides regulatory background (pp. 3), followed by an overview of the second first notice proposal (pp. 4). The Board then analyzes and makes findings on each of the issues raised in the rulemaking record during the second first notice.

## **I. BACKGROUND**

### **A. Procedural History**

In this part of the opinion, the Board describes how this rulemaking proceeded—from the second first notice *Illinois Register* publication of the proposal, to the public hearings, and through the end of the public comment period.

#### **1. Second First Notice Publication**

The Board adopted a second first notice opinion and order on October 4, 2019. *See Amendments to 35 Ill. Adm. Code 225.233, Multi-Pollutant Standard (MPS), R18-20 (Oct. 4, 2018)*. In that opinion, the Board committed to hold an additional hearing on the proposal. The Board also set forth specific questions on the proposal for the participants to respond at hearing or in comments.

The proposed second first notice amendments were published in the *Illinois Register* on October 26, 2018. 42 Ill. Reg. 19158 (Oct. 26, 2018). Publication started a comment period of at least 45 days under the IAPA (5 ILCS 100/5-40(b) (2016)). The Board allowed public comment until May 1, 2019.

#### **2. Public Hearings**

The Board held an additional hearing on January 29, 2019, in Springfield. On February 4, 2019, the Board received a transcript of the hearing (1/29/19 Tr.). The IEPA did not prefile testimony but did provide responses to a number of questions posed by the Board in the second first notice opinion (Exh. 49). Pre-filed testimony of Andrew Armstrong was filed by the Illinois Attorney General's Office (AGO) for the people of the State of Illinois (Exh. 48). Prefiled testimony by James P. Gignac on behalf of the Environmental Law & Policy Center, Environmental Defense Fund, Natural Resources Defense Council, Respiratory Health Association, and Sierra Club (Environmental Groups) was also filed (Exh. 50).

On January 29, 2019, David Bloomberg, Manager of the IEPA's Air Quality Planning Section, along with Rory Davis, an Environmental Protection Engineer in the Air Quality Planning Section of the IEPA, answered additional questions on behalf of the IEPA from the Board and participants. Likewise, Mr. Armstrong and Mr. Gignac responded to questions at hearing from the Board and participants. The Board also heard eighteen oral public comments from citizens.

#### **3. Oral and Written Public Comments**

As noted above, the Board held another day of hearing at which the Board heard eighteen oral public comments. The deadline for filing of public comments was May 1, 2019. In addition to the oral public comments, the Board received an additional 629 written public comments during the second first notice comment period, totaling 3,550 written comments in this docket. For a summary of the public comments filed prior to the Board's second first notice opinion

please see the Board's October 9, 2018 order. Amendments to 35 Ill. Adm. Code 225.233, Multi-Pollutant Standard (MPS), R18-20, slip op. at 6-8 (October 4, 2018).

As mentioned above, the Board heard eighteen oral public comments at the January 29, 2019 hearing. All eighteen of the public commenters opposed amending the MPS. *See generally* 1/29/19 Tr. Many of the individual commenters were concerned about the potential health effects that amending the MPS could cause. *See, e.g.* 1/29/19 Tr. at 4, 18, 35. Individuals also expressed concerns about the effects increased emissions would have on climate change. *See, e.g. id.* at 9, 37, 39. Some commenters also asked that the Board reject amending the MPS and maintain the existing rate-based system. *See, e.g. id.* at 13, 16.

The Board also received two written comments in favor of the MPS revisions from interest groups. The Illinois State Conference of International Brotherhood of Electrical Workers (IBEW) and Local Union No. 51 of the IBEW each filed comments urging the Board to proceed to second notice within thirty days from the end of the public comment period. PC 3294, 3299. In its critique of the Board's handling of the rulemaking, the IBEW's comments point to the IEPA's original October 2, 2017 request for expedited consideration and the Board's decision to hold another hearing in January 2019. *Id.*

Many individuals also filed written public comments in response to the second first notice order. Some individuals asked the Board to maintain the rate-based MPS system rather than amend to a mass-based cap. *See, e.g.* PC 3287, 3300. Another commenter opposed to amending the MPS was encouraged by the newly elected Governor's words regarding protecting air quality and the environment generally. *See, e.g.* PC 3264. Yet other commenters argued that the State should be transitioning towards clean energy. *See, e.g.* PC 3288, 3290, 3292. Others expressed concern that amending the MPS was an environmental justice issue which overwhelmingly affects low-income minority areas. *See, e.g.* PC 3265, 3292. Many other commenters were concerned with the potential health impacts an amended MPS could have, especially for children. *See, e.g.* PC 3262, 3291.

## **B. Regulatory Background**

The Board carefully reviewed the history of the MPS in the second first notice opinion and will not repeat that discussion here. *See* Amendments to 35 Ill. Adm. Code 225.233, Multi-Pollutant Standard (MPS), R18-20 (Oct. 4, 2018). The Board provides a table of abbreviations and acronyms used in this opinion:

<b>Abbreviations and Acronyms</b>	
<b>Act</b> = Illinois Environmental Protection Act	<b>MPS</b> = Multi-Pollutant Standard
<b>BART</b> = Best Achievable Retrofit Technology	<b>MWh</b> = megawatt hour
<b>CAA</b> = federal Clean Air Act	<b>NAAQS</b> = National Ambient Air Quality Standards
<b>CAIR</b> = Clean Air Interstate Rule	<b>NO<sub>x</sub></b> = nitrogen oxides
<b>CAMR</b> = Clean Air Mercury Rule	<b>PC</b> = public comment
<b>C.F.R.</b> = Code of Federal Regulations	<b>PJM</b> = Pennsylvania New Jersey Maryland

	Interconnection LLC
<b>CPS</b> = Combined Pollutant Standard	<b>PM</b> = Particulate Matter
<b>DRR</b> = Data Requirements Rule	<b>RTO</b> = regional transmission organization
<b>EGU</b> = electrical generating unit	<b>SCR</b> = selective catalytic reduction
<b>Exh.</b> = hearing exhibit	<b>SIP</b> = State Implementation Plan
<b>FERC</b> = Federal Energy Regulatory Commission	<b>SO<sub>2</sub></b> = sulfur dioxide
<b>FGD</b> = flue gas desulfurization	<b>SR</b> = Statement of Reasons
<b>lb/mmBtu</b> = pounds per million British thermal units	<b>TSD</b> = Technical Support Document
<b>MATS</b> = Mercury and Air Toxics Standards	<b>USEPA</b> = United States Environmental Protection Agency
<b>MISO</b> = Midcontinent Independent System Operator, Inc.	

## **II. SECOND FIRST NOTICE**

In this section of the opinion, the Board summarizes its findings from the second first notice opinion. The summaries are in the following order; rulemaking under the Act; environmental and health impacts; mass-based limits and combining MPS Groups; mass cap reductions for retirement and mothballing; and technical feasibility and economic reasonableness.

### **A. Rulemaking Under the Act**

The Board evaluated all of the comments and evidence in the record to arrive at its proposed second first notice amendments. As described below, the Board addressed and resolved the contested and general issues, respectively, posed in this rulemaking. In doing so, the Board determined whether the amended proposal is protective of the environment and public health, technically feasible, and economically reasonable.

### **B. Environmental and Health Impacts**

#### **1. Allowable vs. Actual Emissions**

A core dispute—if not *the* central issue—was how to assess the environmental impact of the IEPA’s proposal. The IEPA maintained that environmental impact should be assessed by comparing allowable emissions under the specified mass cap levels to maximum allowable emissions under the existing MPS rates. On the other hand, the AGO and Environmental Groups contended that allowable emissions under the specified mass cap levels should be compared to projected emissions based upon historical data, such as heat inputs and unit-level emission rates. While pressing their respective positions, the participants, at least initially, devoted considerable attention to which measure—allowable emissions or projected emissions based upon “actual” or historical data—is appropriate for demonstrating compliance with CAA requirements, such as the Regional Haze Rule. *See, e.g.*, PC 2750 at 4-6, n.5, 11; PC 2902 at 14-15; Exh. 37 at 5. The Board, therefore, first considered which metric was appropriate for our purposes.

Mr. Bloomberg of the IEPA explained that, “to demonstrate to USEPA that a regulation does not pose a risk of backsliding, the Illinois EPA must provide information to show that the allowable emissions under a new rule are at least as stringent as the allowable emissions under the previous SIP submittal.” 1/17/18 Tr. at 22. Mr. Bloomberg further testified that, according to USEPA officials, CAA Section 110(l)—the anti-backsliding requirement—is satisfied if the comparison of allowable emissions establishes that the new standard would allow no greater emissions than the existing SIP. 4/17/18 Tr. at 84, citing Exh. 47. If the new rule would instead allow increased emissions, *i.e.*, it represents a relaxation of the existing standard, a more “in-depth [non-interference] demonstration” is required. 4/17/18 Tr. at 85, citing Exh. 47. The USEPA officials also stressed, in response to an IEPA query, that an “‘actuals-to-actuals’ comparison is impossible because ‘actuals’ can only be measured after they have happened. The best you can do is place an upper limit (*i.e.* an allowable limit) that sources are required to emit below.” Exh. 47 at 2.

The same federal officials distinguished the cases upon which the AGO relied to show that SIP revisions require a comparison of actual emissions under the existing SIP to those under the revision, explaining that neither case addressed whether allowable or actual emissions must be used to show noninterference in an anti-backsliding evaluation. *See* Exh. 47 at 3-4, citing Exh. 37 at 5-6. Based on this evidence, the Board found that the IEPA established that, for purposes of evaluating the proposed SIP revision, USEPA requires a comparison of allowable emissions under the existing SIP and the revised SIP. And, given this finding, the Board also accepted the IEPA’s representation that USEPA Region 5 officials have indicated that, under this analysis, the proposed MPS amendments likely are approvable as a revision to Illinois’ Regional Haze SIP. *See* 1/17/18 Tr. at 36-37; Exh. 13.

The Board recognized, however, that these facts do not dictate how the Board should assess environmental impact under State law. A strict “allowables-to-allowables” comparison, although required for a SIP revision, is not automatically appropriate under the Act and Board rules. As the AGO points out and the IEPA acknowledged, the Board is not “constrained to” the IEPA’s anti-backsliding analysis when considering the environmental impact of the IEPA’s proposed MPS amendments. PC 2897 at 20, citing 4/17/18 Tr. at 93.

The MPS was not originally proposed and adopted to bring Illinois into compliance with the Regional Haze Rule. *See* 1/17/18 Tr. at 138; Mercury, R06-25, slip op. at 1, 5 (Dec. 21, 2006). Rather, the current MPS was meant to provide a technically feasible regulatory alternative to immediate compliance with the Illinois mercury rulemaking. *Id.* The USEPA’s indication to the IEPA that the SIP revision is likely approvable, *see* TSD at 3, Exh. 13, reflects an assessment that the amendments would not interfere with Illinois’ progress toward visibility improvement goals under the Regional Haze Rule.

The IEPA argued that allowable emissions are the only proper measure of impact in this context. The IEPA explained that, by definition, allowable emissions are calculated based on a source’s emission rate at its maximum rated capacity, unless a federally enforceable permit condition restricts a source’s operating rate, hours of operation, or both. PC 2750 at 3 n.3, citing 35 Ill. Adm. Code 203.107; *see also, e.g.*, TSD at 12; PC 2750 at 6; 1/17/18 Tr. at 26 (opining

that the “only way to properly evaluate a worst-case scenario is by comparing allowable emissions”). According to the IEPA, an allowable emissions methodology avoids the “unpredictabilities and uncertainties” inherent in projecting actual future emissions. PC 2750 at 11; PC 2898 at 9.

The IEPA maintained that relying on historical data to project future emissions for comparing the proposed rule amendments is problematic because the possible outcomes depend upon which data is used. PC 2750 at 9-10; *see also* PC 2753 at 18 (where *Vistra* explains that using historical data, such as actual annual unit-level emission rates, yields results that vary “widely” depending on which year’s emissions rates are used). Actual emissions fluctuate from year to year for reasons unrelated to environmental rules, such as weather, fuel prices, and the “general strength of the economy.” TSD at 11.

The IEPA noted that the AGO’s testimony highlights the problems with using actual emissions and operational data to project future emissions. *See* PC 2750 at 6-8. The AGO’s attempt to render the projections reflect “how pollution sources operate in the real world” (Exh. 37 at 7) has generated a wide range of outcomes under shifting methodologies. These outcomes range from an “actual potential to emit” of 51,083 tons of SO<sub>2</sub> and 32,172 tons of NO<sub>x</sub>, using 2017 unit-level emission rates, to “actual annual emissions” of 34,094 tons for SO<sub>2</sub> and 18,920 tons for NO<sub>x</sub>, using 2002 heat inputs for each current MPS unit and “actual 2017 unit-level emission rates.” *Compare* 4/17/18 Tr. at 25-26, citing Exh. 37 att. 6, *with* Exh. 37 at 17-19.<sup>1</sup> Although the AGO did not treat the highest levels noted above as maximum allowable emissions under the existing MPS rates, AGO witness Mr. Gignac testified that only modestly lower figures—49,305 tons for SO<sub>2</sub>, and 29,140 tons for NO<sub>x</sub>—should be considered “total maximum allowable emissions” of each pollutant using 2016 unit-level rates. Exh. 9 at 17-19.

Further, as noted by the IEPA, both the “actual potential to emit” and “actual annual emissions” calculations rely on problematic methodologies. They depend upon selecting specific years’ data and categories of data: the former, 2016 unit-level emission rates; and the latter, both 2002 heat inputs and 2017 unit-level emission rates. The IEPA maintains that the various figures and caps suggested by the AGO “demonstrate the subjectivity of the Illinois AGO’s approach and that there is a multitude of ways to calculate an emissions cap when one makes arbitrary choices about which historic variables and data to use.” PC 2750 at 8. Selecting other years’ data would yield different outcomes, clearly reflecting the “unpredictabilities and uncertainties” of these alternative approaches to projecting emissions. PC 2750 at 11.

The AGO dismissed as minimal the variation in annual MPS unit-level emission rates from 2013 to 2017. *See* Exh. 37 at 15-16. The AGO’s calculations, however, reveal that even

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<sup>1</sup> *Vistra* represents that Mr. Armstrong agreed at hearing that attachment 6 to his testimony (Exh. 37) shows that the MPS plants’ “actual potential to emit” for SO<sub>2</sub>, using 2017 unit-level emission rates, is 53,083 tons. PC 2753 at 17-18, citing 4/17/18 Tr. at 25-26. Although this is a correct summary of that testimony, attachment 6 in fact shows the total as 51,083 tons—the sum of cells H29 (Dynergy Group SO<sub>2</sub> emissions at Max Heat Input) and P48 (Old Ameren Group SO<sub>2</sub> actual potential to emit). The Board accordingly cites this number rather than that in the post-hearing comment and transcript.

seemingly minor variations in these emission rates can produce considerable differences in fleetwide “potential to emit.” *See id.* at Atts. 3-6. For example, according to the AGO’s tables, the potential to emit SO<sub>2</sub> for the Dynegy Group alone was 10,213 tons in 2013, but 8,830 tons in 2017, despite seemingly small differences in virtually all Dynegy Group unit-level rates. *Id.* at Atts. 3, 6. Annual unit-level emission rates vary the most at the MPS plants lacking controls, because these plant’s emissions depend on the sulfur content of the coal consumed. *See* Exh. 37 at 15-16. Unit-specific heat inputs also fluctuate, depending on annual “specific unit usage.” PC 2750 at 8-9.

Variability aside, projections based on unit-level emission rates are also problematic because, under the existing MPS, units are not required to meet any individualized emission rates. Therefore, no regulatory basis exists to restrict a unit to any year’s actual unit-level emission rate. *See* PC 2750 at 8; *see also* 1/17/18 Tr. at 49 (explaining that MPS units are not required to meet emission rates on a “unit or source-specific basis”).

For these reasons, the Board found reliable neither the AGO’s “actual potential to emit” nor its “actual annual emissions” analyses in assessing environmental impact. The Board further agrees with the IEPA that allowable emissions, by contrast, are an objective, logical, and predictable gauge. And, the Board accepted the IEPA’s calculation of maximum allowable emissions under the existing MPS: 66,354 tpy for SO<sub>2</sub>; 32,841 tpy for NO<sub>x</sub>; and 13,766 tons for seasonal NO<sub>x</sub>. PC 2750 at 3; *see also* TSD at 9-11. The IEPA explained that these figures represent full-capacity operations at the MPS plants, consistent with the regulatory definition of “allowable emissions.” PC 2750 at 3 n.3. Moreover, no participant disagreed about the correctness of this calculation by using the inputs upon which the IEPA relied; rather, what certain participants challenged is the IEPA’s reliance on maximum allowable emissions to assess environmental impact. The Board has already found, however, the IEPA’s approach is reasonable and reliable.

Further, the Board was not bound, as the AGO contends, to evaluate environmental impact based on historical heat inputs because it so evaluated that impact in Mercury Monitoring, R09-10. In that proceeding, Ameren’s proposal to modify its MPS emission rates and schedule was based upon what Ameren anticipated it could comply with at the time. Using Ameren’s data, the IEPA calculated an average heat input based on the three highest years between 2000 and 2008 and applied it to a 2010 - 2020 timeframe in order to show that the proposed emission rates and schedule would provide a projected environmental benefit over the subsequent 11 years and beyond 2020. The IEPA did not use actual emission rates from previous years or actual emissions from a single year in its analysis as were used by the AGO. Mercury Monitoring, R09-10, slip op. at 5 (June 18, 2009).

Finally, the AGO pointed to no Board ruling or statement in Mercury Monitoring R09-10 that could be read as requiring the use of actual heat inputs, rather than full-capacity data, to evaluate environmental impacts. Indeed, the Board sees nothing in its R09-10 opinions even implying that the IEPA’s decision to average three years of the highest heat inputs, albeit coupled with allowable emission rates, to assess environmental impacts. Moreover, the Board’s reliance on that analysis was intended to become the default standard. The Board accords no preclusive effect to R09-10’s use of such data.

In order to evaluate environmental impact and otherwise consider the proposed amendments, the Board need not completely ignore historical emissions and trends. Actual emissions from recent years may bear some relationship to future emissions, if only as a baseline for comparing possible scenarios under modified standards. In this rulemaking, the Board recognizes the several recent years of declining SO<sub>2</sub> and NO<sub>x</sub> emissions from the MPS fleet and appreciates the concerns of affected organizations and individuals about potentially reversing those pollution reductions by switching to mass-based limits, particularly if the chosen limits are not sufficiently stringent. *See, e.g.*, PC 2887 (citing report that proposed amendments would allow nearly double the amount of SO<sub>2</sub> emissions from Dynegy plants); *see also* 1/17/18 Tr. at 237 (commenter claiming that Dynegy “wants to pollute more, up to 30,000 tons more”). From 2013 to 2017, total annual SO<sub>2</sub> emissions from the MPS plants peaked at 44,382 tons and declined to a more recent low of 27,621 tons, while NO<sub>x</sub> emissions during the same period peaked at 18,849 tons and dropped to 13,925 tons.<sup>2</sup> *See* TSD at 14-15, Tables 5 & 6; Exh. 37 at 10. These amounts are all dramatically lower than the full-capacity numbers: 66,354 tpy for SO<sub>2</sub> and 32,841 tpy for NO<sub>x</sub>. *See, e.g.*, PC 2750 at 3; TSD at 9-11.

The Board also understands that affected communities and others fear that, even with a meaningful reduction in fleetwide annual allowable emissions under mass caps, the transition from emission rates to mass limits would allow Vistra to run controlled units—particularly Coffeen and Duck Creek, but also Havana, and Baldwin stations—less frequently, or not at all, while shifting generation to Vistra plants that lack pollution controls—Edwards, Newton, Joppa, and Hennepin stations. *See, e.g.*, PC 2751 at 29, 33-35; PC 2905; PC 2904 at 1-2; 4/16/18 Tr. at 13-14. The record makes clear that, putting aside other, non-MPS emission standards that restrict the plants’ emissions such as the Cross-State Air Pollution Rule, mass caps would allow exactly this shift—including in instances where the existing MPS emission rates would not permit it. *See, e.g.*, Exh. 9 at 9-13; Exh. 37 at 11-12; PC 2751 at 33-35; PC 2752 at 10-11. For this reason, the Board relies upon evidence in the record pertaining to other means of assessing potential emissions, such as modeled emissions discussed below, in evaluating localized impacts and setting protective mass limits. The Board also considered the past several years of emissions data cited above.

## **2. Plant Utilization and Localized Impacts**

The record before second first notice shows that, regardless of whether the Board adopted the IEPA’s proposal, Vistra might close units it finds to be uneconomical to operate under current electricity market conditions. Exh. 15 at 12-14; 4/17/18 Tr. at 193-201; PC 2749 at 3-4; 3/6/18 Tr. at 137-139; Exh. 25 Att. D at 24-25. The record revealed no plans to retire any specific units, and it was not clear whether or when any units would be retired at all. *See, e.g.*, Exh. 15 at 13; 1/18/18 Tr. at 123. Except for the fleetwide figures provided to the Board, and statements that some plants are operating at a loss from time to time and “at risk” of retiring, as well as examples of when the units could have operated at a loss, Dynegy and Vistra have not tied any specific economic losses to any specific EGUs or the current MPS rule in general. *See,*

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<sup>2</sup> The IEPA maintains that 2016 actual emissions “were lower than usual” and are therefore an outlier. Exh. 29 at 7.



*e.g.*, Exh. 15 at 12-13; Exh. 6 at 15-16, 21-22; 1/18/18 Tr. at 123, 129-130.

Rather, the record indicated that Vistra's evaluation of the Illinois fleet's performance operation is pending. *See, e.g.*, 4/17/18 Tr. at 193- 201. It is possible that, if the Board replaced the MPS rate-based limits with mass-based limits, lower-emitting MPS plants could be shutdown and the generation taken up by less-controlled plants in the fleet. *See, e.g.*, Exh. 6 at 13, 16; Exh. 15 at 14; PC 2749 at 4, at 10; Exh. 14 at 9-10. Vistra would no longer be required to run lower-emitting plants just for the sake of averaging the emission rate and would be able to retire units that are uneconomical to run. Under this scenario, Vistra could increase generation at the remaining units. 3/6/18 Tr. at 141; PC 2752 at 12. If those uneconomical units retire after the MPS rule changes, Vistra might increase generation at the remaining units if the market requires. 3/6/18 Tr. at 139; Exh. 15 at 14.

However, the Board found evidence that shows other restrictions, including those designed to maintain local air quality, exist to determine how much the emissions from each MPS unit, either uncontrolled or controlled, may increase. *See, e.g.*, PC 2750 at 12-13. In addition to these non-MPS emission limits, as part of the MPS revision the IEPA proposed additional limits to protect local air quality, such as the SO<sub>2</sub> limit for Joppa, and the NO<sub>x</sub> seasonal emission rates for some units. *Id.* at 12. These limits, which will continue to apply whether or not the Board amends the MPS rule, ensure that air quality around the MPS plants and throughout the State of Illinois will not interfere with the attainment or maintenance of the NAAQS.

The Board found that the NAAQS is the appropriate standard to evaluate potential health and environmental risks of any increased emissions of a pollutant for which USEPA has established a NAAQS. NAAQS is an objective federal standard, well-grounded in extensive USEPA research and public participation. PC 2750 at 12-13. The proposed revised SO<sub>2</sub> cap is almost half of the modeled SO<sub>2</sub> emissions from the MPS fleet and demonstrated no interference with attaining or maintaining the NAAQS. *See* Exh. 29 at 11-12; SR at 6; TSD at 6-7; Exh. 1 at 3. The results of the DRR and Pekin nonattainment area modeling show that any increase of SO<sub>2</sub> emissions will be significantly below the NAAQS in the areas surrounding the MPS fleet. In the unlikely event that emissions from units lacking pollution controls approach levels threatening the NAAQS, the IEPA will take appropriate action to control those emissions. *See, e.g.* 3/6/18 Tr. at 165, 168-74. The Board agrees with the IEPA that the DRR and area attainment requirements protect against increased SO<sub>2</sub> emissions from uncontrolled MPS sources.

As to concerns about the proposed amendments' health effects, the Board noted that the primary NAAQS, such as the 1-hour SO<sub>2</sub> NAAQS, are required to protect public health "with an adequate margin of safety . . ." 75 Fed. Reg. 35520, 35521 (June 22, 2010) (attached to Exh. 34 as Exh 5); *see also* PC 2750 at 18-20. USEPA establishes a primary standard at the maximum permissible level that will protect the health of any sensitive group of the affected population. 75 Fed. Reg at 35521. While setting the 1-hour SO<sub>2</sub> NAAQS, USEPA determined that establishing a new, short-term standard at 75 parts per billion would protect public health with an adequate margin of safety. Moreover, the USEPA found that this new short-term standard, "specifically [would] afford requisite increased protection for asthmatics and other at-risk populations against an array of adverse respiratory health effects related to short term (5 minutes to 24 hours) SO<sub>2</sub>

exposure.” *Id.* at 35550; *see also id.* at 35541-42. The Board did not substitute its judgment for USEPA’s, and the Board accepted that NAAQS is sufficiently protective of public health.

### **3. Potential to Emit (PTE)**

The IEPA confirmed that the “potential to emit” (PTE) for the MPS EGUs represents the greatest mass of emissions any given unit would be allowed to emit based on non-MPS restrictions (whether under the current MPS or the proposed annual caps), such as Part 214, New Source Performance Standards, and consent decree limitations. 3/6/18 Tr. at 163-164. The IEPA provided annual PTE values for SO<sub>2</sub> and NO<sub>x</sub> for all 18 currently-operating MPS EGUs. *See* Exh. 6, Att. 5, Updated Tables 5 and 6. The IEPA explained, “the PTE values serve as a mass emission cap, and that emissions from those units cannot legally emit more, cannot exceed the list of PTE in any circumstance.” 3/6/18 Tr. at 164. The PTE for the eight MPS sources are summarized below.

<b>Potential to Emit</b>		
<b>Source</b>	<b>NO<sub>x</sub> tpy</b>	<b>SO<sub>2</sub> tpy</b>
Baldwin	8,245	8,245
Havana	2,417	2,417
Hennepin	2,650	9,050
Coffeen	9,664	660
Duck Creek	5,505	26,411
ED Edwards	8,667	21,269
Joppa	15,111	161,469
Newton	8,157	39,152

Asked by the Board whether it would be plausible for Newton Unit 1 to emit up to its PTE amount of 39,152 tpy SO<sub>2</sub> under an SO<sub>2</sub> cap of 49,000 tpy, the IEPA stated that it would be “extremely unlikely” for an MPS EGU to increase its emissions up to its PTE level without triggering additional IEPA review. The IEPA’s Mr. Bloomberg explained that an increase in SO<sub>2</sub> emissions over 15% would trigger the requirements of the DRR, which could include modeling to determine compliance with the NAAQS and additional restrictions on the unit. *Id.* at 164-166, 175. Mr. Diericx of Dynegey added that, based on 2014 emissions data for Newton, the 15-percent DRR provisions would be triggered if SO<sub>2</sub> emissions exceeded 18,800 tpy. 3/6/18 Tr. at 177.

Regarding DRR review, Mr. Bloomberg admitted it would take the IEPA approximately six months after receiving the previous calendar year’s data to determine whether an increase in emissions warranted additional emission restrictions. 3/6/18 Tr. at 168-170. However, he said that a company like Dynegey or Vistra would be aware that emissions increases beyond 15% would result in new restrictions, as well as potential enforcement action, if the increase caused a violation of the NAAQS. *Id.* at 170-171.

### **4. Anti-Backsliding**

Section 110(l) of the CAA limits approval of SIP revisions to those that would not

“interfere with any applicable requirement concerning attainment and reasonable further progress . . . .” 42 U.S.C. § 7410(l). The IEPA states that its Air Quality Section completes an anti-backsliding analysis under CAA Section 110(l) each time a SIP revision is proposed due to a related rule change or variance. 4/17/18 Tr. at 69.

For the proposed amendments, the IEPA’s anti-backsliding demonstration relied on the emissions data in Tables 1, 2, 7, and 8 of the TSD. Those tables show that the proposed mass emissions limits on NO<sub>x</sub> (25,000 tpy) and SO<sub>2</sub> (55,000 tpy) for the MPS EGUs are lower than the allowable NO<sub>x</sub> (32,841 tpy) and SO<sub>2</sub> (66,354 tpy) emissions under the current MPS rate-based standards. TSD at 9-10, & 17-18. Additionally, the IEPA’s analysis demonstrated that the proposed limits are lower than the total projected emissions of NO<sub>x</sub> (27,951 tpy) and SO<sub>2</sub> (55,953 tpy) under Illinois Regional Haze SIP. TSD at 19. Further, the IEPA noted that, although emissions of other criteria pollutants may vary with EGU utilization, the proposed amendments would not change the allowable emissions of carbon monoxide, ammonia, PM, or volatile organic compounds from the affected sources. *Id.*

Mr. Bloomberg of the IEPA explained, “[i]n order to demonstrate to USEPA that a regulation does not pose a risk of backsliding, the Illinois EPA must provide information to show that the *allowable emissions* under a new rule are at least as stringent as the allowable emissions under the previous SIP submittal.” 1/17/18 Tr. at 22 (emphasis added). According to the IEPA, USEPA has indicated that the IEPA’s anti-backsliding analysis done by comparing allowable emissions is a straightforward way of demonstrating the reductions. 1/17/18 Tr. at 36-37, 137; Exh. 1 at 2; TSD at 3.

The Board agreed with the IEPA that the proposed mass-based limitations for SO<sub>2</sub> and NO<sub>x</sub> meet the goals of Illinois’ Regional Haze SIP. Further, the IEPA’s modeling review demonstrates that the mass caps do not interfere with NAAQS attainment or maintenance, or reasonable further progress toward NAAQS attainment. The Board also found that the IEPA has demonstrated that the proposed amendments do not pose a risk of backsliding under Section 110(l) of the CAA. The Board agreed with the IEPA that the use of allowable emissions is consistent with USEPA procedures. Additionally, the Board found that the IEPA’s revised proposal, as well as AGO’s alternate proposals, satisfy the above requirements because they have mass caps set at levels lower than the IEPA’s initial proposal.

### **C. Mass-Based Limits and Combining MPS Groups**

The Board previously found that allowable emissions are an objective and reliable indicator to assess the environmental impact of the proposed amendments. The Board also accepted IEPA’s calculation of maximum allowable emissions—full-capacity operations—under the existing MPS rates: 66,354 tpy of SO<sub>2</sub>; 32,841 tpy of NO<sub>x</sub>; and 13,766 tons for seasonal NO<sub>x</sub>. *See, e.g.*, TSD at 9-11. IEPA’s initial proposal, at 55,000 tpy for SO<sub>2</sub>, 25,000 tpy of NO<sub>x</sub>, and 11,500 tons of seasonal NO<sub>x</sub>, self-evidently reduces allowable emissions and maintains IEPA’s “commitment” in the Illinois’s Regional Haze SIP to maintain emissions below “anticipated” levels. PC 2750 at 3-4, n.3; *see also* TSD at 18-19. The Board agreed with the IEPA that its proposal reduced allowable emissions, from full-capacity estimates, for the proposed combined MPS Groups. *See* PC 2750 at 10, 22.

From this, it follows that the IEPA’s revised proposal, to set the SO<sub>2</sub> cap at 49,000 rather

than 55,000 tpy (*see* Exh. 29 at 1-2) also lowers maximum allowable emissions for the proposed combined MPS Group and is not inconsistent with federal standards. The lower SO<sub>2</sub> cap is an attempted “compromise” by the IEPA to maintain emissions below the AGO’s initial calculation of maximum allowable emissions (*see* Exh. 9 at 17-18)—49,305 tpy in SO<sub>2</sub> emissions, derived under an analytical approach that the IEPA continues to reject. PC 2750 at 4; Exh. 29 at 1-2. Further, under questioning from the Board, the IEPA conceded that “no specific evidence” in the record drove it to revise the SO<sub>2</sub> cap proposal. 4/17/18 Tr. at 164. Given this concession, the Board found the IEPA’s revised proposal for SO<sub>2</sub> inappropriate and declines to adopt it.

Regarding environmental impact, the Board was unpersuaded that reductions in allowable emissions should be dismissed, out of hand, as occurring on “paper only.” PC 2900 at 5-6. Rather, the Board found it meaningful, if not necessarily controlling, that the proposed amendments cap SO<sub>2</sub> and NO<sub>x</sub> emissions were well below full capacity—the “worst-case scenario,” in terms of air pollution. *See* Exh. 6 at 9. Absent regulatory relief, emissions under the IEPA’s original and revised mass limits could not lawfully exceed a “hard cap” that is below SIP commitments. PC 2750 at 3-4; Exh. 6 at 10; 3/6/18 Tr. at 139. These levels also are reliable because emissions up to these levels would not, as the Board found above, interfere with attainment or maintenance of any NAAQS, including the 1-hour SO<sub>2</sub> NAAQS, and would comply with other CAA requirements like anti-backsliding provisions and the DRR. *See* TSD at 3, 15-19; Exh. 6 at 9; Exh. 29 at 7-12. Accordingly, the Board found that replacing rate-based emissions limits with annual mass-based limits substantially below maximum allowable emissions and consistent with Illinois’ SIP commitments is protective of the environment.

The Board found above that mass-based limits at any of the proposed levels will not interfere with the attainment or maintenance of any NAAQS or reasonable further progress toward NAAQS attainment. *See, e.g.*, TSD at 3, 15-19.

Accordingly, the Board found that the IEPA demonstrated that switching from rate- to mass-based caps at the originally-proposed levels—and, logically, the lower revised and alternative proposed caps—would protect human health and the environment.

Next, having declined to adopt at substantive first notice the IEPA’s revised proposal, the Board must select appropriate annual mass cap levels for SO<sub>2</sub> and NO<sub>x</sub>. In addition to the IEPA’s original and revised caps, the record includes the AGO’s suggested limits of 34,094 tpy for SO<sub>2</sub> and 18,920 tpy for NO<sub>x</sub>.<sup>3</sup> The Board already determined that the methodology underlying these numbers—using a combination of 2002 unit-specific heat inputs and 2017 actual unit-level emission rates, *see* Exh. 37 at 17-19—is, like the AGO’s “actual potential to emit” approach, fundamentally flawed, for at least two reasons. First, the approach yields divergent results depending on the chosen years’ data. Secondly, the approach treats historical unit-level rates as “de facto” emission limits on each MPS unit; but, under fleetwide annual emission rates, no unit is required to meet a rate on a “unit or source-specific basis.” 1/17/18 Tr.

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<sup>3</sup> Because the AGO made clear that it “did not propose 49,000 [tpy of SO<sub>2</sub>] as a ceiling,” 3/7/18 Tr. at 46—that is, to keep emissions below the MPS plants’ “maximum allowable” emissions of 49,305 tpy, Exh. 9 at 18—the Board does not treat the AGO’s “actual potential to emit” exercise as a methodology for proposing mass limits.

at 49.

As noted above, the IEPA identified further shortcomings in the AGO's "actual annual emissions" analysis. PC 2750 at 7-8; *see also* 4/17/18 Tr. at 133-43. In fact, the AGO's suggested 34,094 tpy SO<sub>2</sub> mass limit would restrict a combined MPS fleet to an average emission rate of 0.18 lb/mmBTU (34,094 tons/371,304,292 mmBTU), which is lower than even the current 0.19 lb/mmBTU MPS emission rate for Dynegy. Exh. 37, Att. 10. Based upon these deficiencies, the Board declines to set mass caps at 34,094 tpy of SO<sub>2</sub> and 18,920 tpy of NO<sub>x</sub> as the AGO proposed.

By contrast, the AGO did not consider only actual or historical data to propose alternative mass limits totaling 44,920 tpy for SO<sub>2</sub> and 22,469 tpy for NO<sub>x</sub>, with lower individualized caps for the MPS Groups, which would not be combined. *See* PC 2751 at 46-47. These caps track MPS emissions projected by the IEPA for the Regional Haze Rule, based upon 2002 actual heat inputs. *Id.*, citing Exh. 6, Att. 7. According to the AGO, combining the MPS Groups under these caps would unjustifiably lift the operational restrictions that the final MPS SO<sub>2</sub> rate imposes on the Illinois Power Holdings, LLC (IPH)—restrictions that reflect a lack of necessary and "promised" pollution control equipment to meet that rate. PC 2751 at 47.

The Board considered first whether these overall caps, applied to a combined MPS Group, represent sound policy. To the extent they do, the Board then addressed the AGO's proposal that the existing MPS Groups remain separate under Group-specific caps that, taken together, equal the overall caps.

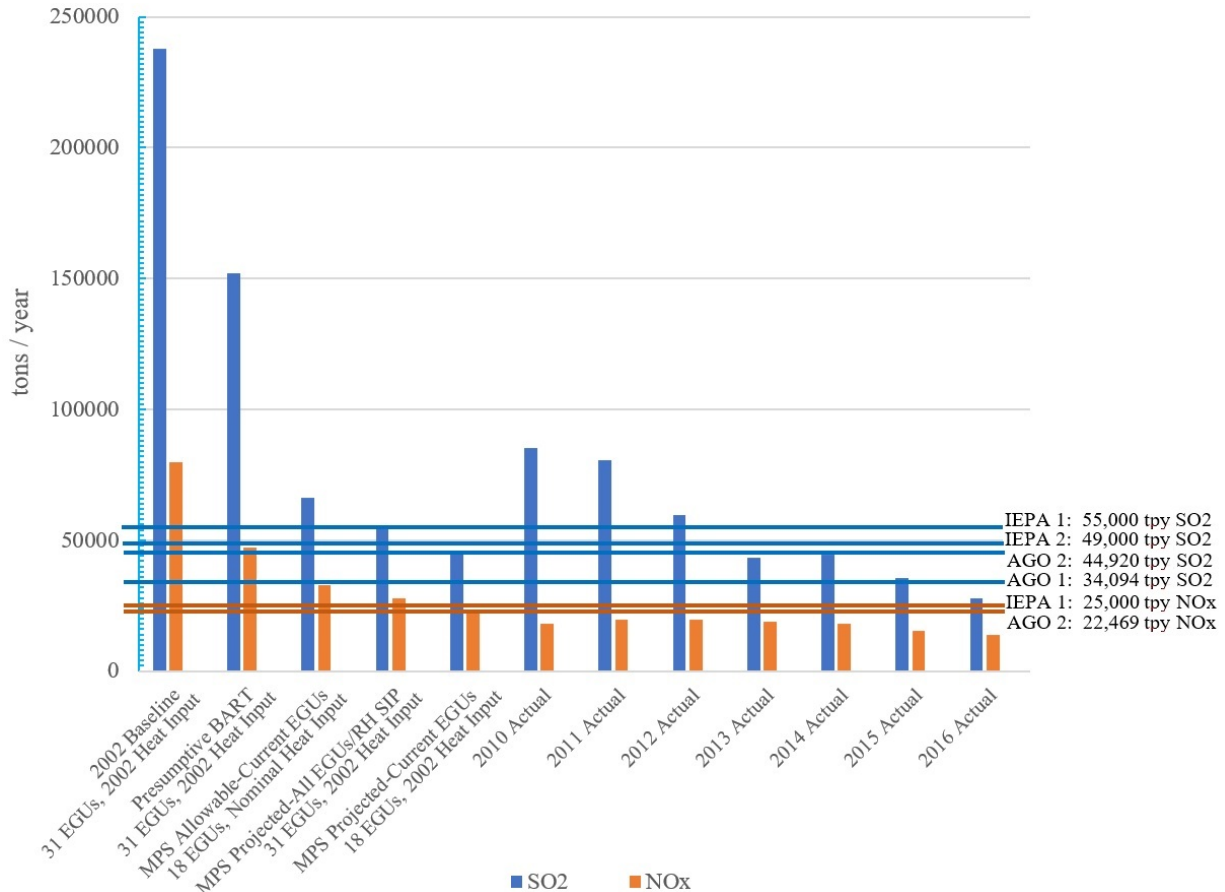
The AGO suggested that alternative caps use the methodology that yielded the SIP emissions targets for the Regional Haze Rule SIP—55,953 tpy for SO<sub>2</sub> and 27,951 tpy for NO<sub>x</sub>, *see* TSD at 17-18—except that the alternative caps exclude the 13 EGUs in the MPS Groups (out of a total of 31 units operating in 2002) that have been retired since 2002. *Compare* Exh. 6, Att. 7 *with* TSD 17-18. Both calculations rely on 2002 unit-specific heat inputs and the final MPS emission rates applicable to each MPS Group. *See* TSD at 16; Exh. 6 at 9, Att. 7; Exh. 37 at 12. The approach is therefore a hybrid of actual and allowable data: historical heat inputs, on the one hand, and allowable MPS emission rates, on the other. *See* PC 2750 at 10; 3/6/18 Tr. at 159-60. And the data used is data the AGO deems suitable in setting mass limits: "caps totaling 44,920 tons of SO<sub>2</sub> and 22,469 tons of NO<sub>x</sub> would reasonably reflect historical heat inputs to the MPS, overall," according to the AGO. PC 2751 at 47. The Board is persuaded that a hybrid approach is a reasonable solution grounded in the CAA. To achieve this, the IEPA suggests mass caps that reflect the MPS plants' actual operations, while considering upper bounds on fleetwide emissions. And, to align the calculation with operations, the Board agrees with the AGO that the calculation should only employ heat inputs and emissions from the eighteen of 31 original MPS units that remain in operation today. *See* 3/6/18 Tr. at 157-59 (in projecting emissions, units that had been contributing emissions and then shutdown would still be included, but as "zero").

Notably, setting limits of 44,920 tpy for SO<sub>2</sub> and 22,469 tpy for NO<sub>x</sub> would limit future emissions to levels closer to actual MPS plant emission levels over the past five years, which ranged from a high of 44,382 tons in 2014 to a low of 27,621 tons in 2016 for SO<sub>2</sub>, and from

18,849 tons in 2013 to 13,925 tons in 2016. *See* Exh. 37 at 10; TSD at 14-15. Thus, the caps would foreclose a dramatic increase in annual emissions over the status quo but still afford the MPS fleet some room for future growth in generation. And, coupled with mass cap reductions for permanent and temporary shutdowns, as discussed below, annual mass caps at these levels would limit and prevent potential sizeable shifts in generation and emissions from controlled to uncontrolled plants.

The Board prepared the bar graph and key below, drawing upon the indicated record sources. As the graph shows, the alternative annual mass limits of 44,920 tons for SO<sub>2</sub> and 22,469 tons for NO<sub>x</sub> compare favorably, not just with recent emission levels, but to other projections such as 2002 baseline emissions under Regional Haze and Presumptive BART emissions.

### Comparison of SO<sub>2</sub> and NO<sub>x</sub> Emissions



**Bar Chart Key:**

**2002 Baseline** actual emissions for all 31 operating EGU's in 2002 at 2002 Heat Inputs:  
 237,761 tpy SO<sub>2</sub>; 79,679 tpy NO<sub>x</sub> (TSD at 17-18)

**Presumptive BART** for all 31 operating EGU's in 2002 at 2002 Heat Inputs:  
 151,949 tpy SO<sub>2</sub>; 47,339 tpy NO<sub>x</sub>

(Exh. 33, 5-Year Progress Rpt at 10-13; BART technical support document at 27, 29-30)

**MPS Allowable** emissions for only 18 EGUs operating in 2016 at Nominal Capacity:  
66,354 tpy SO<sub>2</sub>; 32,841 tpy NO<sub>x</sub> (TSD at 9-10)

**MPS Projected** emissions under Regional Haze Rule for all 31 EGUs operating in 2002 at 2002 Heat Inputs:  
55,953 tpy SO<sub>2</sub>; 27,951 tpy NO<sub>x</sub> (TSD at 17-19)

**MPS Projected** emissions under Regional Haze Rule excluding Retired EGUs at 2002 Heat Inputs:  
44,920 tpy SO<sub>2</sub>; 22,469 tpy NO<sub>x</sub> (Exh. 6, Att. 7; TSD at 17-18)

**2010-2016 Actual** emissions from 18 operating EGUs (TSD at 14-15)

**IEPA 1: IEPA Initial Proposal:**  
55,000 tpy SO<sub>2</sub>; 25,000 tpy NO<sub>x</sub> (TSD at 11)

**IEPA 2: IEPA Revised Proposal:**  
49,000 tpy SO<sub>2</sub> (Exh. 29 at 1-2)

**AGO 1: AGO Initial Proposal** based on 2017 heat input:  
34,094 tpy SO<sub>2</sub> (Exh. 37 at 17-19)

**AGO 2: AGO Alternative Proposed Overall Mass Cap** based on MPS Projected under Regional Haze Rule excluding Retired EGUs at 2002 Heat Inputs:  
44,920 tpy SO<sub>2</sub>; 22,469 tpy NO<sub>x</sub> (PC 2751 at 46-47)

The Board considered the AGO's alternative cap proposal of 44,920 tpy for SO<sub>2</sub> and 22,469 tpy for NO<sub>x</sub> to be reasonable, particularly in light of these other relevant data points, and compared to the other proposed emission limits.

The Board recognized that the IEPA does not favor the AGO's alternative proposal, citing a lack of sufficient support and adding that "it is unclear to IEPA at this time what the ramifications would be if the Board adopts [those] limitations." PC 2898 at 9. However, the IEPA and, for that matter, Vistra, cannot claim surprise simply because the AGO waited until post-hearing comments to formally propose the alternative caps. See PC 2751 at 46-47. At the April 17, 2018 hearing, the Board elicited the IEPA's position on capping SO<sub>2</sub> emissions at 44,920 tpy. See 4/17/18 Tr. at 101-05; see also PC 2897 at 23-24. The IEPA said it does not know Dynegey's position on 44,920 tpy SO<sub>2</sub> except that it was "not thrilled" about 49,000 tpy SO<sub>2</sub>. 4-17-18 Tr. at 105. Mr. Bloomberg of IEPA stated that IEPA does not "see a reason to further reduce" the SO<sub>2</sub> cap below the IEPA's revised 49,000 tpy SO<sub>2</sub> cap. 4/17/18 at 101-02. The IEPA contends it is "not necessary" to do so under the Regional Haze SIP or the NAAQS; the alternative proposed SO<sub>2</sub> cap is based "just on 2002 heat inputs" as opposed to "long range heat inputs"; and it is not clear whether the MPS Groups "could meet" an annual cap on SO<sub>2</sub> emissions of 44,920 tons. *Id.* at 102.

The Board finds that the methodology underlying the alternative caps of 44,920 tpy for SO<sub>2</sub> and 22,469 tpy for NO<sub>x</sub> is sound. Again, this methodology appropriately updates the IEPA's SIP projections to exclude retired units. *See* Exh. 37 at 12, citing Exh. 6, Att. 7; 4/17/18 Tr. at 100-01. Moreover, this approach takes account of actual data, from a base year with a regulatory basis: demonstrating compliance with the Regional Haze Rule. *See* PC 2751; Exh. 37 at 17. It makes no difference here that the IEPA has not yet been required to revise the Regional Haze SIP to incorporate the updated MPS. *See* 4/17/18 Tr. at 102. What matters is that the update is consistent with how emissions are averaged annually under the existing MPS: if “there is no heat input to a unit,” because, for example, a unit is shutdown, there is “no allowance for pollution from that unit.” PC 2897 at 28, n.10.

Furthermore, the AGO addressed the IEPA's claim that 2002 heat inputs are unreliable because of substantial differences in pollution control equipment and unit utilization between then and now. *See* PC 2750 at 7. Specifically, the AGO showed that unit-specific heat inputs in 2002 and 2017 for units that have not been retired are in general “very similar,” and, where they differ, heat inputs were higher in 2002. PC 2897 at 23-24. Also, the AGO demonstrated that Group-level heat inputs in 2002 do not significantly diverge from heat inputs over the last decade, and, were, if anything, higher than more recent years' inputs. *See id.* at 24 (comparing data in attachments 2 and 7 to Exh. 37 and noting a “significant reduction of heat input” at the Joppa plant). The Board found it appropriate to look to 2002 unit-level heat inputs in setting mass emission caps.

For the reasons above, the Board at second first notice proposes mass-based limits of 44,920 tpy for SO<sub>2</sub> and 22,469 tpy for NO<sub>x</sub>.

After deciding the annual mass-based limits, the question became whether to combine the MPS Groups under the overall mass caps that the Board proposed at second first notice. In favor of the Groups' consolidation is the fact that the MPS is a fleetwide rule: it allows owners of eligible EGUs to elect to demonstrate compliance with the Illinois mercury rule via the MPS only if “all EGUs it owns are located in Illinois”—other than any scheduled for permanent shutdown—became subject to MPS requirements. 35 Ill. Adm. Code 225.233(a)(3)(B). According to an Ameren witness in Mercury, R06-25, the MPS does not allow EGU owners to “cherry-pick” units for inclusion in the MPS because it was expected that “you're going to use your entire system to comply with [the MPS] so that they get sufficient reductions in SO<sub>2</sub> and NO<sub>x</sub> system-wide.” Mercury, R06-25, 8/15/06 a.m. Tr. at 285. Thus, combining the MPS Groups would track the MPS's structure while also potentially reducing regulatory burdens without comprising environmental protection.

The Board decided it would not amend the MPS to afford operational flexibility if it comes at the expense of the environment or public health. Along these lines, the AGO fears that combining the MPS Groups will “dramatically increase [] pollution” by allowing Vistra to increase utilization of the IPH Group's “uncontrolled” units—Edwards, Newton, and Joppa EGUs—while “avoiding installing pollution controls that have been promised for over a decade . . .” PC 2751 at 47. The Board addressed these two points in turn.



On the first issue, if the MPS rates were the only constraint on MPS facilities' operations, moving from rate- to mass-based emission limits would allow Vistra to shift generation from well-controlled units in the IPH Group—Coffeen and Duck Creek stations—to units that lack pollution controls such as wet or dry scrubbers, thereby potentially increasing localized pollution. As the IEPA stated, however, the “MPS was not designed or relied upon to specifically protect local air quality; nor *can* an annual standard covering multiple plants across a wide geographic area be reasonably expected to ensure short-term air quality in specific local areas.” PC 2750 at 12 (emphasis in original), citing Exh. 6 at 34; 3/6/18 Tr. at 163. Rather, as the Board found above, other standards, specifically the 1-hour SO<sub>2</sub> NAAQS and the DRR, serve that role. *See, e.g.*, PC 2750 at 12-13; Exh. 6 at 6, 34. As the Board found above that the MPS with annual mass limits will not interfere with attainment or maintenance of the NAAQS, which will continue to apply, as the IEPA emphasizes, “even if utilization of specific plants increases” under the proposed MPS amendments. PC 2750 at 12; *see also, e.g.*, Exh. 29 at 6; Exh. 6 at 5, citing 35 Ill. Adm. Code 214.603 (reciting unit-level limits on hourly SO<sub>2</sub> emissions from Edwards plant).

On the second issue, “promised” pollution controls, the AGO cites no MPS requirement to install controls for SO<sub>2</sub> or NO<sub>x</sub> emissions, and the IEPA stressed that the current MPS “does not require installation of any additional pollution control equipment.” TSD at 4. The Board likewise observed that the MPS ““does not restrict the [IPH] MPS Group from employing any specific method to reach the required emission rates.”” IPH, LLC v. IEPA, PCB 14-10, slip op. at 71 (Nov. 21, 2013), citing Ameren Energy Resources v. IEPA, PCB 12-126, slip op. at 56 (Sept. 20, 2012). Granted, the Board did condition its 2013 grant of a variance to IPH and others in PCB 14-10 on petitioners' meeting construction milestones for flue gas desulfurization controls at the Newton station. *See* IPH, LLC v. IEPA, PCB 14-10, slip op. at 104-05 (Nov. 21, 2013). The Board's subsequent termination of the variance, however, terminated all variance conditions, including the construction milestones. IPH, LLC v. IEPA, PCB 14-10 (Oct. 27, 2016). By requesting termination of that variance, IPH represented that it was able to meet the final SO<sub>2</sub> emission rate three years early, without the variance and without the Newton flue gas desulfurization project, by retiring Newton Unit 2 and “effective[ly] manag[ing]” the remaining units in the IPH Group. IPH, PCB 14-10, slip op. at 6 (Oct. 27, 2016). The AGO also misplaces reliance on statements by Dynegy and IEPA in the original MPS Rule proceeding Mercury, R06-25. *See, e.g.*, PC 2751 at 47, citing Mercury, R06-25, Corrected Joint Statement of IEPA and DMG (Aug. 23, 2006). The statements cited by the AGO concerned only the Dynegy MPS Group rather than what later became the IPH Group (formerly the Ameren Group)—whose emissions most concern the AGO. Accordingly, the Board does not accept the AGO's position regarding never-installed pollution controls.

For the above reasons, the Board at second first notice proposed consolidation of the MPS Groups under the overall annual mass caps of 44,920 tons for SO<sub>2</sub>, 22,469 tons for annual NO<sub>x</sub> limits, and 11,500 tons for the NO<sub>x</sub> seasonal ozone limit.

#### **D. Mass Cap Reductions for Retirement and Mothballing**

The Board next considered whether to reduce the proposed mass caps for SO<sub>2</sub> and NO<sub>x</sub> upon permanent shutdown (retirement) or temporary shutdown (mothballing) of one or more

MPS EGUs. The IEPA proposed reductions to the overall mass caps if an MPS facility ownership is transferred. No participant challenged this part of the IEPA's proposal. Both the IEPA and Vistra opposed, however, further reductions to mass caps for retirement and mothballing of units. For the reasons below, the Board found that the mass caps for SO<sub>2</sub> and NO<sub>x</sub> should be reduced when any MPS facility is transferred or when one or more MPS EGUs are retired or mothballed. Under the IEPA's proposal, the annual compliance period runs from January 1 to December 31, and the seasonal NO<sub>x</sub> compliance period runs from May 1 to September 30.

The Board agreed with the AGO that, in addition to ownership transfer, the proposed mass caps for SO<sub>2</sub> and NO<sub>x</sub> must decline with the retirement (permanent shutdown) or mothballing (temporary shutdown) of MPS EGUs. "Retirement" or permanent shutdown of an EGU occurs when the owner or operator withdraws its operating permit. *Id.* If the owner or operator wanted to re-start operation of a retired unit or facility, the unit would be subject to permitting as a new source. 1/18/18 Tr. at 121. Unlike retirement, if a unit or facility is "mothballed" or temporarily shutdown, an owner retains the operating permits and can decide to resume operation of the unit under existing permits. *Id.*

As noted by the AGO, under the current MPS, a retired or mothballed EGU does not factor into MPS compliance because, without heat input, no allowance is allocated for emissions from the EGU. PC 2751 at 32. Given this aspect of the existing MPS, the Board found no reason to permanently lock in a retired or mothballed EGU's allowance as part of the mass caps when the unit no longer operates. The Board was not convinced by the IEPA's argument that emissions from a retired or mothballed unit must remain part of the mass caps to allow for the MPS units to "pick up" the lost generation. As the IEPA acknowledged, the lost generation could be replaced by any number of sources, whether in the MPS fleet or not; the IEPA conceded that no guarantee exists that an MPS plant will pick it up. The replacement could come from a host of non-MPS sources within or outside of the State, including nuclear, natural gas, and renewable facilities. In fact, Vistra and Dynegy attribute the retirement of thirteen EGUs since the Board adopted the MPS rule to several factors, including "low natural gas prices, environmental regulations, increasing generation from other sources (in part due to subsidies), and a decline in energy and capacity prices in MISO Zone 4." PC 2753 at 7; *see also* Exh. 15 at 6-11. Thus, it cannot be assumed that a retirement of an EGU means that the lost generation would be picked up by other MPS EGUs. Furthermore, the mere possibility that the generation could move to an MPS plant is insufficient, in the Board's view, to warrant allowing increased pollution from less-controlled plants and encouraging retirement or mothballing of MPS units rather than their sale.

For the same reason, the Board found no merit in limiting the allocation amounts for mass cap reductions to 50% of the transfer allocations, as recommended by the IEPA. Accordingly, the Board's proposed second first notice amendments reduced the mass caps for SO<sub>2</sub> and NO<sub>x</sub> when EGUs are retired or mothballed, at the same level (100%) as when plants are transferred.

For mothballed EGUs, the Board proposed that mass caps be reduced only if the units are mothballed for the entire compliance period. This is because the IEPA's recommended unit-

level “shutdown” allocation amounts for reducing the mass caps are based upon an annual or seasonal compliance period. Accordingly, applying the adjustment for temporary shutdown (mothballing) during the entire compliance period or periods would be straightforward, without requiring proration. If an MPS unit or facility is mothballed for the entire annual compliance period (and, therefore, does not generate electricity that creates emissions), the MPS group’s seasonal and annual caps would decrease by the allocated amount, and the EGU owner must ensure compliance with the decreased caps.

As noted above, at the Board’s request, the IEPA provided allocation amounts for ownership transfer of each MPS facility and shutdown (retirement) of each MPS EGU for an SO<sub>2</sub> cap of 44,920 tpy and a NO<sub>x</sub> cap of 25,000 tpy. PC 2750, Att. 3. The IEPA set the allocation amounts for retirement of EGUs at 50% of the transfer allocations. For transferring MPS facilities, the Board proposed the IEPA’s SO<sub>2</sub> allocation amounts. For retiring and mothballing EGUs, the Board proposed SO<sub>2</sub> allocation amounts on a unit-level basis equal to 100% of the transfer amounts.

As for NO<sub>x</sub>, the Board proposed allocation amounts for the transfer, retirement, and mothballing of units that reflect the revised annual cap of 22,469 tons and an ozone season cap of 11,500 tons. The annual NO<sub>x</sub> allocation amounts were calculated by employing the same “proportional” methodology used by the IEPA for reducing the SO<sub>2</sub> cap from 49,000 tpy to 44,920 tpy. See PC 2750 at 25-26. The proposed allocation amounts are set forth in the table below.

	<b>NO<sub>x</sub> Allocation Amount (TPY) upon transfer, retirement, or mothballing</b>	<b>NO<sub>x</sub> Allocation Amount (TPY) for Ozone Season (May 1 – Sep 30) upon transfer, retirement, or mothballing</b>	<b>SO<sub>2</sub> Allocation Amount (TPY) upon transfer, retirement, or mothballing</b>
Baldwin (entire facility)	5,400	2,700	4,900
Baldwin Unit 1	1,850	920	1,680
Baldwin Unit 2	1,710	860	1,560
Baldwin Unit 3	1,840	920	1,660
Havana (entire facility)	1,620	810	1,225
Hennepin (entire facility)	1,350	675	4,900
Hennepin Unit 1	320	160	1,180
Hennepin Unit 2	1,030	500	3,720
Coffeen (entire facility)	1,800	900	200
Coffeen Unit 1	670	340	80
Coffeen Unit 2	1,130	560	120
Duck Creek (entire facility)	1,260	630	200
Edwards (entire facility)	2,700	1,350	8,200
Edwards Unit 2	1,130	560	3,440
Edwards Unit 3	1,570	780	4,760
Joppa (entire facility)	4,680	2,340	14,700

Joppa Unit 1	780	390	2,450
Joppa Unit 2	780	390	2,450
Joppa Unit 3	780	390	2,450
Joppa Unit 4	780	390	2,450
Joppa Unit 5	780	390	2,450
Joppa Unit 6	780	390	2,450
Newton (entire facility)	2,430	1215	8,200

The Board emphasized that the annual mass-based caps for SO<sub>2</sub> and NO<sub>x</sub>, as proposed at second first notice, were based upon the eighteen currently-operating MPS EGUs. If Vistra transfers or retires any MPS plants or EGUs before the Board adopted the final rule amendments, the Board stated it would adjust the mass caps to reflect the transfers or retirements, using the proposed allocation amounts.

The Board invited the participants to comment on mass cap reductions for retired and mothballed EGUs.

### **E. Technical Feasibility and Economic Reasonableness**

Section 27(a) of the Act directs the Board to consider the “technical feasibility and economic reasonableness of measuring or reducing the particular type of pollution” when conducting a rulemaking. 415 ILCS 5/27(a) (2016). For the reasons below, the Board found the second first notice proposal to combine the two MPS Groups and establish mass-based emissions limitations for SO<sub>2</sub> and NO<sub>x</sub> to be technically feasible and economically reasonable.

As required by Section 27(b) of the Act (415 ILCS 5/27(b) (2016)), the Board requested in a letter dated October 19, 2017, that the Illinois Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study of the IEPA’s proposed rules. The Board requested that DCEO determine by December 10, 2017, whether it would conduct the study. The Board received no response to this request. No person testified or commented on the Board’s request or the lack of a response from DCEO. 3/7/18 Tr. at 107.

#### **1. Technical Feasibility**

The Board proposed revised mass-based annual caps for the combined MPS Group of 44,920 tons of SO<sub>2</sub> and 22,469 tons of NO<sub>x</sub>. These annual caps, which are based on the current MPS units’ heat inputs in 2002 and the current MPS rates, are lower than the caps under the IEPA’s proposal, by approximately 8% for SO<sub>2</sub> and 10% for NO<sub>x</sub>. The Board adopted the IEPA’s MPS Group ozone season cap of 11,500 tons NO<sub>x</sub>, and an annual plant-specific cap of 19,680 tons of SO<sub>2</sub> for Joppa.

**a. SO<sub>2</sub> Cap.** The IEPA contended that its originally proposed SO<sub>2</sub> cap allows for greater utilization of MPS units. 1/12/18 Ag. Resp. at 10. Dynegy asserted that annual emissions fluctuate based on many factors, including weather, economy, natural gas prices, and scheduled and unscheduled outages. Exh. 14 at 15. Dynegy further argued that, even under the existing MPS, “the current MPS emission levels could increase significantly and far exceed recent year

emission levels. As such, the future operation of any given unit may increase regardless of whether the unit is subject to an emission cap or emission rate limit.” *Id.*

Since the adoption of the MPS rule, however, the emissions and heat input data in the record (from 2010 thru 2016) clearly show a decreasing trend in annual SO<sub>2</sub> emissions and heat inputs for the current MPS EGUs. *See* TSD at 13-15; Exh. 6, Att. 4 Fig. 1. In fact, annual SO<sub>2</sub> emissions in 2016 were approximately 17,000 tons below the proposed SO<sub>2</sub> cap of 44,920. As such, the Board found its revised SO<sub>2</sub> emission limit to be technically feasible.

Additionally, as the Board proposed to combine the two MPS Groups, the proposed rule would allow Vistra to comply with the mass emission caps by averaging across its entire MPS fleet of eighteen EGUs. Accordingly, to comply with the SO<sub>2</sub> cap, if approved, Vistra would be able to average (1) SO<sub>2</sub> emissions from nine of the IPH EGUs lacking SO<sub>2</sub> emissions control equipment with (2) SO<sub>2</sub> emissions from those units that have installed flue gas desulfurization or spray dry absorber. *See* Exh. 6 at 7. This structure further ensures technical feasibility.

**b. NO<sub>x</sub> Cap.** At second first notice, the Board proposed to adopt an annual NO<sub>x</sub> cap of 22,469 tons, which is 10% lower than the IEPA’s proposed annual cap, and an ozone season cap at the same level as the IEPA’s proposal. The IEPA’s proposed annual cap would be at the same level as the Board’s if the IEPA had reduced its NO<sub>x</sub> cap to correspond with the IEPA’s reduction of the SO<sub>2</sub> cap from 55,000 tons to 49,000 tons. The IEPA did not do so, however, stating that the annual cap of 25,000 was below the level determined via the AGO’s methodology and the rules require NO<sub>x</sub> controls to be operated year round. 3/6/18 Tr. at 183-184.

As noted by the IEPA, to ensure a “high level” of NO<sub>x</sub> control, all eighteen MPS EGUs have one or more NO<sub>x</sub> controls consisting of over fire air, SCR, or low NO<sub>x</sub> burners. Exh. 6 at 7; SR at 7. Additionally, the proposed rule requires seven MPS EGUs currently equipped with SCRs (Baldwin 1 and 2, Coffeen 1 and 2, Duck Creek 1, E.D. Edwards 3, and Havana 9) to comply with a combined NO<sub>x</sub> average emission rate of no more than 0.10 lb/mmBtu from May 1 to September 30. SR at 6-7. The proposed rule also required SCRs to be operated whenever the EGUs they serve are in operation. *Id.*

In addition, the annual NO<sub>x</sub> emissions data from 2010 through 2016 show that the annual NO<sub>x</sub> emissions from the MPS EGUs have fallen consistently under 20,000 tons. TSD at 14. Also, because the Board proposed combining the MPS Groups, Dynegy would be able to comply with the NO<sub>x</sub> caps by averaging across its entire MPS fleet of eighteen EGUs, including EGUs with SCRs and those without them. Accordingly, the Board found that its revised NO<sub>x</sub> emission limits were technically feasible.

## **2. Economic Reasonableness**

### **a. Distinguished from Financial Condition**

Section 27(a) of the Act directs the Board, in adopting substantive regulations, to “take into account,” among other factors, the “economic reasonableness of measuring or reducing the

particular type of pollution.” 415 ILCS 5/27(a) (2016).

The Illinois Supreme Court held that “take into account” in Section 27(a) means the Board “is only required to ‘consider’ or ‘weigh carefully’ the technical feasibility and economic reasonableness of compliance with proposed regulations in the rulemaking process.” Granite City Division of National Steel Co. et al. v. PCB, 155 Ill. 2d 149, 181, 613 N.E.2d 719, 764 (1993). The Court further held that Section 27(a) “does not impose specific evidentiary requirements on the Board . . . Rather, [it] requires only that the Board consider or take into account the factors set forth [in that section].” *Id.* at 183.

The Environmental Groups argued that “[b]ecause the rule change will weaken environmental protections and allow for increased SO<sub>2</sub> emissions, the Board should only adopt [the proposed rule] if the existing rule is economically unreasonable.” PC 2752 at 14. Specifically, the Board should adopt the IEPA’s proposal only if the existing MPS “impose[s] economic hardship on the company by causing economic instability that will jeopardize” the MPS fleet’s “ability to remain functional and able to support its operations.” *Id.* The Environmental Groups contended that, because Dynegy/Vistra’s Illinois fleet is “cash flow positive,” the current rule is not economically prohibitive, and the Board should reject the IEPA’s proposed amendments to it. *Id.* at 16.

The Environmental Groups cite the testimony of Ms. Dzubay of ELPC (Exh. 42; 4/17/18 Tr. at 58-67) that Dynegy/Vistra did not provide sufficient information to show that dispatching the “must-run” units to comply with the existing MPS negatively affected the fleet’s “gross margin.” PC 2752 at 19, citing 4/17/18 Tr. at 60. Furthermore, Ms. Dzubay testified that the IEPA never verified whether the current MPS caused Dynegy/Vistra to suffer a financial loss or, if it did, the extent of that loss. 4/17/18 Tr. at 65. She also testified that the IEPA failed to verify whether Dynegy/Vistra’s claimed loss justifies changing the MPS to increase operational flexibility and economic stability. *Id.* Rather, Ms. Dzubay concluded, the MPS fleet’s gross margin *increased* during the years when Dynegy asserted it faced the must-run situation, showing that the must-run situation is “immaterial” to the fleet’s viability and economic stability. PC 2752 at 19-20, citing 4/17/18 Tr. at 61-62.

The IEPA contended that the Environmental Groups misinterpret Section 27(a), which calls on the Board to take economic reasonableness into account. PC 2750 at 24, citing 415 ILCS 5/27(a) (2016). The IEPA further argued that, under Section 27(a), the Board has historically employed a cost-benefit analysis, balancing the cost to the regulated entity of implementing pollution controls against the benefit to the public of reducing pollution. *Id.*, citing IEPA v. PCB, 308 Ill. App. 3d 741, 751, 721 N.E.2d 723, 730 (2d Dist. 1999). The focus in this analysis, according to the IEPA, is not on the regulated entity’s “financial history and profit margins.” *Id.*

Vistra similarly argued that the Environmental Groups and the AGO incorrectly seek to impose a burden on the IEPA to show a current rule is no longer economically reasonable. PC 2902 at 4. And, Vistra continued, the same standards apply whether the Board’s substantive involves amendments to existing rules or entirely new rules. *Id.* at 4-5, citing Nitrogen Oxide Emissions, Amendments to 35 Ill. Adm. Code 217, R11-24, slip op. at 36, 39 (July 21, 2011).

The Board disagreed with the argument that an existing rule may not be amended absent a showing that compliance with it is no longer economically reasonable. Section 27(a) of the Act requires that the Board consider the cost, to the regulated entity, of complying with proposed rules or rule amendments. The Board discerned no requirement in the Act that the Board, while reviewing proposed rule amendments, must determine whether the existing rule imposes unreasonable financial hardship on the regulated entity. Rather, that determination applies in the context of regulatory relief. This is especially true for petitions for variances from existing rules. *See* 415 ILCS 5/35(a) (2016) (authorizing Board to grant a variance upon finding that compliance with a regulatory requirement “would impose an arbitrary or unreasonable hardship”). In these situations, the regulated entity seeks relief, in an adjudicatory proceeding, from a Board rule. In this general rulemaking, however, the IEPA, not Dynegey or Vistra, is the proponent. As such, the regulated entity, Dynegey/Vistra, bears no burden to show that it is no longer economically reasonable for the fleet to comply with the MPS. And, in a general rulemaking, the Board must consider whether the *proposed* standard would impose a hardship on regulated entities. “The Board must then use its technical expertise and judgment in balancing any [such] hardship . . . against [the Board’s] statutorily mandated purpose and function of protecting our environment and public health.” *Granite City*, 155 Ill. 2d at 183.

Based upon these settled principles, the Board also disagreed with the Environmental Groups’ position that the Board must consider, in its review of the proposed MPS amendments, the financial condition and viability of the MPS fleet or Vistra as a whole. Because the Board must consider the economic reasonableness for regulated entities to comply with a proposed rule, it is irrelevant whether, and to what extent, the existing rule affects regulated entities’ financial condition, whether represented by cash flow or gross margins by business segment. That is particularly true here, given that the IEPA, the amendments’ proponent, does not rely on the existing rules’ economic impact to the affected entities or regulated facilities. The Board did not comment on the relevance of such factors in contexts beyond this proceeding.

Under the correct standard, the Board next considered whether it is economically reasonable for the MPS fleet to comply with the proposed amendments, as modified by the Board in the second first notice order.

#### **b. Board Finding on Economic Reasonableness**

In its initial filing, the IEPA stated that the proposal is economically reasonable because the change to a mass-based cap will provide operational flexibility for the MPS fleet. TSD at 8. Vistra also stressed that the switch to a mass-based cap will afford operational flexibility, thereby eliminating the need to run units at a loss for MPS compliance. PC 2902 at 3. The proposal would “enable Vistra to better supply the energy market” and significantly reduce allowable emissions. *Id.* Vistra concluded that the IEPA’s proposal is economically reasonable. *Id.*

Based upon this record, the Board found that the IEPA’s proposal is economically reasonable. Although the Board, in the second first notice order, modified the IEPA’s proposal to reduce the annual mass emission limitations for SO<sub>2</sub> and NO<sub>x</sub>, no participant suggested that the modified limits or other changes, such as annual cap reductions for retirements and

mothballing, were not also economically reasonable. The Board was convinced that the hybrid approach to setting annual mass caps that the Board is employing—a combination of unit-specific heat inputs from 2002 and allowable emission rates—yields achievable mass limits that track, with appropriate adjustments, the IEPA projections of emissions from the MPS fleet.

The modified annual caps proposed at this second first notice were lower than those proposed by the IEPA. When coupled with combining the MPS groups, however, these modified annual mass caps would allow, like the IEPA’s proposal, considerable operational flexibility. As such, Vistra still would have been able to operate the MPS units according to “market demands,” without “needing to balance emission rates” across the fleet solely for MPS compliance. PC 2902 at 3, 6; *see also* TSD at 8 (arguing that the proposed amendments are economically reasonable because they “provide operational flexibility to the affected sources” and will not cause adverse economic impact). Running controlled units at uneconomic prices, solely to comply with MPS rates, may cause problems for more than just Dynegy/Vistra; “must-run” MPS plants may displace electricity generation from other sources, including those that emit less and are more economical to operate at lower prices, thereby distorting the wholesale power market. *See* TSD at 5; Ex. 6 at 22-23; 1/17/18 Tr. at 80-82. By contrast, the operational flexibility provided by the Board’s proposed amendments “will help to ensure the viability of the entire Illinois fleet” and allow for the rational economic dispatch of MPS units. Exh. 15 at 15. Therefore, the Board found that the MPS amendments proposed for second first notice were economically reasonable and would not have an adverse economic impact on the people of the State of Illinois.

### **III. BOARD DISCUSSION**

At second first notice, the Board invited comments on two issues. First, the Board invited participants to comment on the proposed mass-based caps of 44,920 tpy for SO<sub>2</sub> and 22,469 tpy for NO<sub>x</sub>. Second, the Board invited participants to comment on further mass-based cap reductions for retired and mothballed electrical generating units (EGUs). In addition to the issues raised by the Board in the second first notice opinion, a hearing officer order, issued on the same day as the Board’s opinion, asked participants to comment on issues related to mass-based caps, mothballed and retired units, and the effective date of the rules. Below, the Board discusses and makes findings, where necessary, on these issues.

#### **A. Mass-Based Caps**

Regarding the issue of mass-based caps, the IEPA offered more stringent caps for SO<sub>2</sub> and NO<sub>x</sub> than those proposed by the Board in its second first notice opinion, while the AGO and Environmental Groups continued to oppose the shift to mass-based caps. Below, the Board addresses these issues and explains its decision to proceed with the IEPA’s more stringent mass-based emissions limits.

##### **1. Comments and Testimony**

In its testimony, the IEPA indicated no objections to the Board’s second first notice opinion or its findings. Exh. 49 at 1. Prior to hearing, the IEPA sought additional time to



reevaluate the rule. PC 3250. At hearing, the hearing officer granted an extended public comment period so that the IEPA and participants could continue to discuss the rule. 2/4/19 Tr. at 66-69. In its final comment, the IEPA proposed even more stringent mass-based caps for Vistra than those proposed by the Board at second first notice. *See generally* PC 3544. The IEPA noted that it reevaluated the issues in the rulemaking. PC 3544 at 1. The IEPA undertook the reevaluation by consulting with other rulemaking participants, including Vistra. *Id.* Based upon this reevaluation, the IEPA determined that the Board's proposed emission limits at second first notice could be modified further to "benefit the environment." *Id.* at 1-2. The IEPA proposed mass-based caps of 34,500 tpy for SO<sub>2</sub> and 19,000 tpy for NO<sub>x</sub>, while retaining the 11,500 ton cap for NO<sub>x</sub> for the ozone season. *Id.* at 2.

The IEPA further proposed the cessation of at least 2,000 megawatts (MW) of coal-fired electric generation within the MPS fleet. *Id.* Operations will cease within 60 days of receiving shutdown approval from the Midcontinent Independent System Operator, Inc. (MISO), but no later than December 31, 2019. The EGU owner will be required to notify the IEPA of the owner's submission of the necessary documentation to MISO, MISO's response, and validation of the permanent cessation of operations of the EGUs. *Id.*

The Environmental Groups continued their opposition to a shift to mass-based caps for the MPS group and requested that the Board reject amendments to the rule. PC 3542 at 1. The Environmental Groups continued to voice concerns that the shift to mass-based caps will allow uncontrolled units to generate higher emissions and affect the air quality around those plants. *See generally* PC 3542 and Exh. 50. Mr. Gignac, now representing the Environmental Groups, presented a scenario in which the Board's proposed mass-based caps would result in a shift in generation and SO<sub>2</sub> emissions from controlled plants to uncontrolled and less-controlled plants in the MPS fleet. Exh. 50 at 4. Mr. Gignac offered one such possibility of how a shift in generation from plants with scrubbers to plants without pollution controls could occur under the proposed mass-based caps. *Id.* As to the IEPA's proposed amendments in its final comment, the Environmental Groups took no position, as the proposal was presented "only orally." PC 3542 at 1. The Environmental Groups did endorse the AGO's calculated mass-based caps if the Board shifts to a mass-based cap. *Id.* at 5.

The AGO testimony indicated that the AGO stands by its previous position regarding mass-based caps. Exh. 48 at 1. However, in the AGO's final comment, the AGO indicated its support for the IEPA's mass-based caps. PC 3547 at 1. The AGO acknowledged that it had supported different, more stringent mass-based caps than those proposed by the IEPA but, in the interest of resolution of this rulemaking, the AGO would not oppose the IEPA's caps. *Id.* The AGO noted that the IEPA's amendment to the Board's second first notice proposal represents a SO<sub>2</sub> emissions reduction of nearly 40% from the IEPA's original proposal, and a 25% from the Board's second first notice proposal. *Id.*

Vistra participated in discussions with the IEPA to develop the amendments in the IEPA's final comment. PC 3545 at 2-3. Vistra accepts the IEPA's revisions. *Id.* at 2. Vistra noted that the revisions are more stringent than the Board's second first notice proposal, and the IEPA's revisions addressed concerns raised by the AGO and the Environmental Groups. *Id.* at 3. Vistra further noted that the IEPA's amendment go beyond the AGO's and the Environmental

Groups' concerns by requiring permanent shutdown of at least 2,000 MW. Vistra acknowledged that the retirements include EGUs that are not well controlled for SO<sub>2</sub> and NO<sub>x</sub>. *Id.* at 4. Vistra committed to considering the IEPA's recommendation when making the retirement decisions, along with other relevant factors. *Id.*

## 2. **Board Finding**

In its second first notice opinion, the Board determined that annual mass-based caps for the MPS group were appropriate. The Board found that the IEPA's original proposal, however, could be more stringent and proposed caps of 44,920 tpy for SO<sub>2</sub> and 22,469 tpy for NO<sub>x</sub>. The Board found that those standards were economically reasonable and technically feasible. *See Amendments to 35 Ill. Adm. Code 225.233, Multi-Pollutant Standard (MPS)*, R18-20 at 62-63 (Oct. 4, 2018). Additionally, the Board found that these mass-based caps would ensure that the NAAQs are met and were protective of health and the environment. *Id.* at 43. While the Board appreciates the continued concerns of the Environmental Groups, the Board will not revisit its decision to adopt mass-based caps for the MPS group. This is especially true given that the IEPA's final proposal continues to address many of the Environmental Groups concerns.

The IEPA's final comment proposed mass-based caps that are more stringent than those proposed by the Board in its second first notice opinion and included a requirement that Vistra permanently shutdown at least 2,000 MW of coal fired electric generation in the MPS group. Vistra accepted these limits and will consider shutting down the units without controls to achieve the 2,000 MW reduction. Additionally, while the IEPA's final proposal does not fully implement the AGO's recommendations, the AGO also accepts the IEPA's final caps. Based upon the Board's prior findings, and the willingness of the participants to accept the IEPA's new, more stringent mass-based caps, the Board finds that the mass-based caps proposed by the IEPA are economically reasonable and technically feasible. The Board, therefore, proposes those caps for second notice.

The IEPA's proposal to require the 2,000 MW permanent shutdown of coal-fired electric generation, along with its recommendation to seek that reduction from EGUs without pollution controls, should further alleviate concerns that the owner may operate uncontrolled units at higher emission rates than controlled units. The Board echoes the IEPA's recommendation and encourages Vistra to seek the reduction from uncontrolled EGUs rather than those with pollution controls. The Board finds that the inclusion of this permanent shutdown further supports a transition to mass-based caps. The Board incorporates these revisions into the respective language in today's second notice proposal.

### **B. Transfer, Temporary or Permanent Shutdown of EGUs**

A hearing officer order issued on the same day as the Board's second first notice order included a series of questions regarding the IEPA's enforcement of mass-based caps when an EGU is transferred or temporarily or permanently shut down. *See Hrg. Off. Or. 10/4/18, Attach. A.* The IEPA responded that it will track the transfer, temporary shutdown, or permanent shutdown of EGUs, and adjust caps appropriately. *Exh. 49 at 1.* The IEPA will take this action upon notification by the EGU owner of a transfer or temporary or permanent shutdown. *Id.*

The AGO supported reducing mass-based caps for retired and mothballed MPS units. Exh. 48 at 1.

Below, the Board further explores issues regarding mass-based caps when an EGU is transferred, temporarily or permanently shut down. First, the Board notes that it changes the word “shall” to “must” in Sections 225.233(f)(1)(D), (g)(1)(C), and (h)(1)(C) of the rule language to align with current rulemaking initiatives.

## **1. Adjustment of Proposed Mass-Based Caps.**

**a. Comments and Testimony.** The IEPA did not object to the Board’s proposal (Section 225.233(f)) to adjust caps when an EGU is transferred. Exh. 49 at 2. The IEPA suggested an amendment to the language proposed by the Board in Section 225.233(f)(1)(A) to ensure that the NO<sub>x</sub> seasonal limit is taken into consideration. The IEPA will adjust the cap for the compliance period in which the transfer occurs. *Id.*

Likewise, the IEPA had no objection to adjusting the caps for a permanent shutdown as proposed by the Board (Section 225.233(g)). *Id.* The IEPA believes that setting the date on which the owner or operator submits a request to modify its operating permit is logical and provides a clear-cut, objective way to determine permanence. *Id.* After the January 2019 hearing, the IEPA suggested an amendment regarding permanent shutdowns in Section 225.233(g)(1)(B). PC 2931. The IEPA was concerned that confusion remained regarding how emissions from a shutdown EGU would be handled and offered language to clarify it. *Id.*

The IEPA also did not object to the Board’s proposal (Section 225.233(h)) for a mass cap adjustment when a unit is temporarily shutdown or mothballed. Exh. 49 at 3. The IEPA believed, however, that the language should be amended to properly reflect the Board’s intent. Specifically, the IEPA recommended that the Board amend Section 225.233(h)(1) and (h)(3) to specify that emission caps are only adjusted if a unit “does not operate during an entire compliance period.” *Id.* The IEPA also suggested amending the language in Section 225.233(h)(3)(D) to alter the timing of reporting and what information is reported. *Id.* at 4. The IEPA noted that a source cannot comply with the language as proposed because a temporary shutdown is not deemed to have occurred until the source does not run for an entire compliance period. *Id.* The IEPA also does not require information regarding the duration of a temporary shutdown to determine compliance. *Id.*

In Section 225.233(h)(1)(B), the IEPA is concerned that the Board’s proposed language does not reflect the concept that a unit must be shut down for an entire compliance period in order to be considered temporarily shutdown for that compliance period. Exh. 49 at 4. The IEPA suggested amending the language to indicate that the MPS Group must comply with the adjusted limit for the pertinent compliance period. *Id.*

In its final comment, the IEPA offered language to amend the Board’s proposal at Sections 225.233(f)(2), (g)(2), and (h)(2), which would adjust the allocation amounts for the new mass-based caps proposed by the IEPA. PC 3544, Exh. 1. The IEPA also continued to

recommend that the Board propose amendments offered in Exh. 49 and PC 2931 for second notice. PC 3544 at 3. The IEPA argued that an entire compliance period offers a clear, well-defined, and easily implemented standard. *Id.* The IEPA is concerned that use of MISO standards, as suggested by the AGO, could be problematic, as neither the IEPA nor the AGO are experts on MISO's rules and standards. *Id.* at 3-4. To this end, the IEPA suggested that amending the language, as proposed in PC 2931, by adding the phrase "to produce electricity for sale" clarifies the language regarding temporary shutdowns and mirrors the language defining an EGU. *Id.* at 4.

As to the AGO's suggestion for additional reporting and information, the IEPA argued that such requirements are unnecessary. PC 3544 at 7-8. First, the IEPA noted that the information is available via Freedom of Information Act (FOIA) requests. Second, the IEPA stated that, in the air regulatory context, neither the IEPA nor the Board have required regulated entities to include the information requested by the AGO on any website. *Id.* at 8. As to notices of transfer, temporary shutdowns, or permanent shutdowns, the IEPA receives this information in the compliance reports that EGU owners file every year, and the IEPA saw no need for redundant filings. *Id.* at 9. The IEPA also questioned the need for a Board note in the rule, arguing that such a "snapshot" could be unhelpful and confusing. *Id.* at 5.

The AGO sought the inclusion of additional housekeeping information for all EGUs transferred, retired, or mothballed during a compliance period. Exh. 48 at 2-3. The AGO believed that information required in notices of transfer, permanent shutdown, and temporary shutdown in subsections (f)(3), (g)(3), and (h)(3) should be included in the reports required by Sections 225.233(k)(2)(A) and (B). *Id.* The AGO sought to require Vistra to create and maintain a website that would include the information provided to the IEPA: 1) under subsections (k)(2)(A) and (B) (compliance reports); and 2) any notices and reports under subsections (f)(3), (g)(3), (h)(3), (k)(3), and (k)(4). *Id.* at 4. The AGO also sought inclusion of a Board note listing all EGUs mothballed at the time of the rule's adoption.

The AGO also argued that transfers and temporary or permanent shutdowns should be treated the same under the rules. Exh. 48 at 5. The AGO proposed that an MPS unit's transfer, retirement, or mothballing each should sever it from the remaining MPS Group. *Id.* at 5-6. The AGO then recommended a requirement that the MPS owner demonstrate compliance with allocated emission limits for both the remaining MPS units, and the transferred, retired, or mothballed unit. *Id.* The AGO offered language to effectuate this position. *Id.* at 7-10.

In its final comment, the AGO supported the IEPA's revisions in its prefiled testimony and comments. PC 3547 at 2. The AGO stated that the IEPA's proposed amendments to the Board's second first notice proposal also ameliorate the AGO's concerns. *Id.* at 3. The AGO believed that the IEPA's current proposal brought clarity to the current MPS owner's shutdown plan. *Id.* Furthermore, the AGO believed that the IEPA's language closes a potential loophole in the rule. *Id.* at 4. Given these factors, the AGO would not object to the Board proposing language reflecting the IEPA's final comment. *Id.* However, the AGO continued to advocate for additional reporting and recordkeeping requirements. *Id.* at 5.

The Environmental Groups supported the Board's proposal to reduce mass-based caps

when an EGU retires and supported the language provided by the IEPA in PC 2931. PC 3542 at 6. The Environmental Groups supported allocating the mass-based caps for mothballing or retiring EGUs. *Id.* The Environmental Groups also endorsed the AGO's suggestion for additional reporting and information. *Id.* at 11.

The Environmental Groups are concerned that a temporary shutdown does not occur unless the EGU is shut down for the entire compliance period. PC 3542 at 6. The Environmental Groups are concerned that this creates a possibility for the MPS owner to increase emissions at some units when a unit is first mothballed. *Id.* To address ambiguity in what constitutes a temporary shutdown, the Environmental Groups agreed with the AGO that a temporary shutdown that requires a MISO filing should trigger a reduction in emission caps. *Id.* at 8. The Environmental Groups supported the proposed language offered by the AGO in Exh. 48.

Vistra agreed with the IEPA's responses to the Board's questions. PC 3545 at 9-10. Vistra agreed with the IEPA that a temporary shutdown occurs when a unit does not operate during the entire compliance period. *Id.* at 10. Vistra commented that the AGO proposed definition is more complicated and without environmental benefit. *Id.*

**b. Board Findings.** The Board will proceed to second notice with a proposal that requires adjustment of the MPS Group annual mass caps when an EGU or EGUs are transferred, temporarily shutdown, or permanently shutdown. The participants agree that this is a proper step to take, and the Board continues with this proposal.

The Board is not persuaded by the argument made by the AGO or the Environmental Groups that a different definition for temporary shutdown is necessary. The definition, which requires an EGU to not be operational for an entire compliance period in order to qualify as a temporary shutdown, is clear and unequivocal. If the Board were to amend the language as suggested by other participants, confusion and inefficiencies would occur. Therefore, the Board proceeds to second notice with temporary shutdown defined as an EGU that is shut down for an entire compliance period.

Likewise, the Board is unpersuaded that additional reporting requirements and information on temporary shutdowns are appropriate. The IEPA will receive the information as part of the compliance reporting made by the unit owner and operator. This information would be available to the public through FOIA requests to the IEPA. Therefore, the Board sees no merit in requiring the owner or operator to maintain information on a website.

The AGO and the Environmental Groups support inclusion in the rule of a Board note concerning EGUs that may be closed when the rule is adopted. The IEPA opposes such a Board note. The record contains no information regarding Vistra's transfer, temporary shutdown, or permanent shutdown of units. Therefore, the Board cannot include this information, either in the rule or this opinion. Additionally, the Board notes that the Joint Committee on Administrative Rules (JCAR) dislikes the inclusion of Board notes and, in this instance, the note would be of little value.

The Board accepts and incorporates the changes offered by the IEPA in each of the subsections regarding the adjustment of emissions caps where an EGU is transferred, temporarily shutdown, or permanently shutdown. The language offered by the IEPA clarifies the Board's intent and addresses many concerns raised by the rulemaking participants.

## **2. Pro-Rating the Annual Mass Caps**

The IEPA opposed pro-rating the mass-based caps in a calendar year. Exh. 49 at 4. The IEPA argued that doing so would complicate the rule language with no useful purpose from a compliance prospective. *Id.* Also, pro-rating during a temporary shutdown is nonsensical, as a temporary shutdown only occurs if the unit does not run for an entire compliance period. *Id.*

In its final comment, the IEPA continued to oppose pro-rating the mass-based caps for temporary shutdowns. PC 3544 at 6. The IEPA argued that the pro-ration of limits would have minimal impact on MPS emissions and be of little use or environmental benefit. *Id.*

Although the AGO did not believe that pro-rating is required, the AGO offered language for the Board to consider. Exh. 48 at 10-11.

The Board appreciates the attention the participants gave this issue. Based upon these comments and the record, the Board finds that pro-ration of mass-based caps in a calendar year is not necessary under this rulemaking.

## **3. Date of Transfer, Temporary Shutdown, or Permanent Shutdown**

The IEPA stated that it considers the transfer date as the actual date on which the ownership of an EGU transfers from a seller to a buyer. Exh. 49 at 4. The IEPA was unaware of a "tenable" alternative. *Id.* Therefore, the IEPA believed the date in Section 225.233(f)(3) is proper. The IEPA thought it unlikely that discrepancies between the notifications by a seller and a buyer will occur, as a contract will include pertinent dates such as the date ownership transfers from a seller to a buyer. *Id.* at 5

For a permanent shutdown, the IEPA believed that the clearest and most objective date is the date on which the source is no longer permitted to operate. Exh. 49 at 3-4. The IEPA proposed clarifying language to Section 225.233(g)(3).

A temporary shutdown occurs when an EGU is shutdown for an entire compliance period and, therefore, a start date could only be communicated to the IEPA at the end of the applicable compliance period. Exh. 49 at 5. The IEPA offered clarifying language in Section 225.233(f)(3)(A). Also, the IEPA was unaware of limitations regarding how long a unit can be temporarily shutdown, and the IEPA saw no useful purpose for such a limitation. *Id.*

The IEPA did not believe that the baseline mass-based caps should be adjusted for any unit that may be mothballed or retired before adoption of this rule. Exh. 49 at 6. The IEPA noted that the rule language already addresses temporary shutdowns for an entire compliance period and permanent shutdown. *Id.*

The AGO believed that the Board's proposed reporting requirement for the date of the transfer is appropriate. Exh. 48 at 12. The AGO also supported the proposal regarding permanent shutdowns. *Id.* The AGO recommended adding a requirement that temporary shutdowns include notice to MISO.

The AGO agreed with the Board that the mass-based caps should be lowered if Vistra retired any MPS plants or EGUs before adoption of the rule. Exh. 48 at 13.

As both the regulators and the regulated community accept the rule as proposed at second first notice, and offer no dissent to the Board's proposal, the Board sees no reason to amend the proposal. The IEPA believes that the rule language establishes a clear, objective manner to establish the date of transfer, temporary or permanent shutdown. Therefore, the Board finds that proceeding to second notice without amending the proposal with respect to these dates is appropriate.

### **C. Compliance Date**

The IEPA, the AGO, and Vistra take no issue with the January 1, 2019, effective date in the rule. Exh. 48, 49, and PC 3545. Vistra noted that January 1, 2019, is not technically an "effective date." PC 3545 at 8. This is because the MPS is structured as an annual standard, and January 1, 2019, is the date from which the annual compliance period is measured. Under the current rule and the proposed revisions, the compliance period runs through December 31. *Id.* Compliance is not reported to the IEPA until March 1 of the following year. *Id.*, citing 35 Ill. Adm. Code 225.233(k). Vistra opined that, if revisions are finalized before the end of the year, January 1, 2019, is an appropriate start date for the first annual compliance period. *Id.*

The IEPA agreed with Vistra's assessment that the standard is an annual standard. PC 3544 at 10. The IEPA opined that, if the Board adopts the rule before October 1, 2019, Vistra will be able to comply with the new 2019 annual standard. *Id.*

The AGO did not object to the rule taking effect on January 1, 2019, if the rule is adopted during the 2019 calendar year. Exh. 48 at 2.

The Board agrees with the analysis of Vistra, the IEPA, and the AGO. The emissions limits in Section 225.233 are annual and seasonal emissions caps. Accordingly, the date of January 1, 2019, merely sets the start date of an annual compliance period. Vistra is the only entity subject to this rulemaking, and Vistra has no issue with setting January 1, 2019, as the beginning of the compliance period for the new mass-based caps. Therefore, the Board will proceed with January 1, 2019, as the start date of the first compliance period under this new rule.

### **D. Economic Reasonableness and Technical Feasibility**

In its second-first notice opinion, the Board determined that annual mass-based caps for the MPS group were appropriate. The Board found that the IEPA's original proposal, however, could be more stringent and proposed caps of 44,920 tpy for SO<sub>2</sub> and 22,469 tpy for NO<sub>x</sub> at

second first notice. The Board found these standards to be economically reasonable and technically feasible. Amendments to 35 Ill. Adm. Code 225.233, Multi-Pollutant Standard (MPS), R18-20 at slip. op. at 62-63 (Oct. 4, 2018). Additionally, the Board found that those mass-based caps proposed at second-first notice would insure compliance with the NAAQs and, accordingly, were protective of human health and the environment. *Id.* at 43. IEPA's more stringent caps for inclusion at second notice are agreed upon by the regulated entity and the AGO. No evidence was presented to the Board on the specific economic reasonableness and technical feasibility of the IEPA's proposed amendment. As such, the Board finds that proceeding to second notice with the proposal, as amended by the IEPA, is economically reasonable and technically feasible.

#### **IV. CONCLUSION**

The Board proposes amendments to the MPS rule for second notice. The Board incorporates the amendments recommended by the IEPA in its testimony and comments. The amendments: decrease the mass-based caps from those proposed at second first notice; require the reduction of at least 2,000 MW of electric generation by coal-fired EGUs in the combined MPS group no later than December 31, 2019; adjust the allocation amounts for transfers, permanent shutdowns, and temporary shutdowns; and clarify the language of the rule. Lastly, the amendments require the IEPA to reduce the annual mass caps if Vistra retires any units prior to the effective date of this rule.

#### **V. ORDER**

The Board directs the Clerk to submit to the Joint Committee on Administrative Rules for second notice review the rule in the addendum attached to this opinion.

IT IS SO ORDERED.

I, Don A. Brown, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on June 20, 2019, by a vote of 5-0.



Don A. Brown, Clerk  
Illinois Pollution Control Board