

## Appendix V

### **RH SIP Responses to Public Comments**

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## **RESPONSES TO PUBLIC COMMENTS ON INDIANA'S REGIONAL HAZE STATE IMPLEMENTATION PLAN**

**United States Environmental Protection Agency** (email from Pamela Blakely received on November 15, 2021)

### Comment 1

The State should also include the summarized FLM comments and responses in the SIP narrative rather than just an appendix in accordance with 40 CFR51.308(i)(3)

### Response 1

The Federal Land Manager's comments are summarized in Appendix U to allow for a more concise document. Since the Appendix is a part of the SIP, IDEM would prefer not to incorporate all of the same language in the body of the document.

### Comment 2

As a general matter, EPA expects states to select their largest in-state contributors to visibility impairment for four-factor analysis. See July 8, 2021, Clarification Memo at 4. In Indiana's case, many of these largest contributors appear to be EGUs that have been screened in through the Q/d analysis. In some instances, IDEM may find it appropriate to not select such a source, even if it is one of the largest sources in the state. For instance, IDEM may decline to not select a particular source based on a demonstration that the source is operating existing effective controls. See August 2019 Guidance 22-25: July 8, 2021, Clarification Memo 5.

### Comment 3

IDEM suggests that recent emission reductions owing to other control measures are a basis for not conducting a four-factor analysis for the selected EGUs. However, it is generally inappropriate to not select a source simply because it was part of an emissions sector that is the subject of numerous industry-wide EGU control programs and downward emissions trends for the first planning period. As a general matter, once a source is screened in based on visibility impacts, a state should not forgo four-factor analysis merely because of other emission reductions (at the source or other sources) or because of recent improvements in visibility. Therefore, IDEM should explain in greater detail how not selecting EGUs for a four-factor analysis still ensures reasonable progress towards natural visibility. If the various control measures and shutdowns listed in this section are necessary for reasonable progress and therefore part of IDEM's Long-Term Strategy, those must be federally enforceable and in the SIP.

### Responses 2 and 3

Indiana received numerous comments related to the state's decision to evaluate all of the electric generating unit (EGU) sources that met Indiana's criteria for selecting sources for four-factor analysis using a reasonable progress analysis for the EGUs. This decision was made early in the State Implementation Plan (SIP) development process based on the EPA's "Guidance on Regional Haze State Implementation Plans for the Second Implementation Period" document, dated August 20, 2019 (2019 EPA Guidance). According to the 2019 EPA Guidance, a key flexibility of the regional haze program is that a state is not required to evaluate all sources of emissions in each implementation period; an analysis of control measures is not required for every source in each implementation period; and for the sources that are not selected for an analysis of control measures for purposes of the second implementation period, it may be appropriate for a state to consider whether measures for such sources are necessary to make reasonable progress in later implementation periods.

Indiana chose to wait until the third planning period to require four-factor analyses from its EGU sources due to the fact that the landscape for the EGU sector has changed so dramatically since the last planning period, resulting in large emission reductions. The EGU sector continues to change rapidly, with a number of additional shut-downs being announced just within the past year. The implementation of new control programs designed to target nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) emissions from the EGU sector have resulted in various upgrades to existing emissions control equipment, several installations of new add-on control devices, a number of conversions to natural gas and numerous EGU retirements with more scheduled shutdowns to come over the second implementation period. In addition, fuel costs have upended the order in which resources are dispatched by the Midcontinent Independent System Operator (MISO) to meet the region's power generation needs and maintain adequate power grid management in the future. Coal fired units that were previously dispatched first are now dispatched last. This change in economic driven dispatching is expected to result in less reliance on the remaining coal fired EGUs and accelerated retirement. As such, Indiana believes that conducting four-factor analyses for EGUs during the next planning period would result in a better use of resources because much of what the state would require based on four-factor analyses conducted for the EGUs would become moot as the EGU sector remains in flux as sources continue to shutdown units, convert to natural gas, and rely more on renewable energy. In fact, allowing the EGU sector to stabilize over the course of the next implementation period would provide more definitive information for better decision-making during the third planning period and produce more feasible and meaningful analyses. Especially in light of the fact that a detailed reliability study would need to be conducted in order to understand the impact that additional shutdowns of coal fired units would have on delivering electricity reliably, dependably, and cost-effectively to the grid.

The RH Rule is purposefully intended to give states discretion and flexibility in meeting their statutory and regulatory requirements to reduce visibility impairment at Class I areas as directed through the RH program. The rule allows states to determine how to show reasonable progress and permits states to leverage emission reductions achieved through other CAA programs that will further improve visibility in protected areas. While the EGU source category was not chosen by IDEM to have four-factor analyses conducted for the second implementation period, these sources were not exempt from being evaluated. A reasonable progress analysis for these units was conducted in lieu of four-factor analyses. Indiana's reasonable progress analysis for these units consists of a quantitative analysis of statewide NO<sub>x</sub> and SO<sub>2</sub> emission reductions from Indiana's EGU fleet for 2007-2019; photochemical modeling using 2016 NO<sub>x</sub> and SO<sub>2</sub> base-year modeled emissions for all existing Indiana EGUs in 2016 to projected 2028 emissions; and source apportionment modeling to assess visibility impacts of all EGUs in Indiana.

EPA addresses visibility requirements in the preamble of the RH Rule as shown on page 35726 (Federal Register Vol 64, No. 126, Pg. 35726): "Since the national goal is expressed in terms of air quality (i.e., visibility) rather than emissions, we (EPA) believe that it is very important to require the quantitative tracking of visibility impairment as an integral element in measuring reasonable progress." Also, on page 35727, "Tracking 'reasonable progress' should involve the tracking of both emissions and visibility improvement". IDEM has demonstrated the decrease of both emissions and visibility impairment by showing significant visibility improvement at Class I areas; and expects the emissions analyses, review of emission controls, current and expected retirements for coal-fired boilers with more renewable energy being utilized for future power generation, and modeled visibility impacts to adequately address Indiana's overall visibility impacts. Both factors (emissions and visibility impairment) are more than adequately addressed in Indiana's EGU reasonable progress analysis with future emission reductions anticipated.

Furthermore, the EGU sector has contributed its fair share of the visibility progress made over the last implementation period which has resulted in emission reductions below the glidepath in all of the Class I areas for which Indiana sources have been found to impact visibility. IDEM has determined existing emission controls are adequate to address regional haze for EGU sources throughout the state based on current “on-the-books” regulatory measures, such as the Cross State Air Pollution Rule (CSAPR) and the Mercury and Air Toxics Standards for the second implementation period. In addition, Indiana will continue to make progress towards the national goal of natural visibility by 2064 with the implementation of other CAA regulations, such as the Revised CSAPR Update Rule and new wastewater regulations for coal ash. The Revised CSAPR Update Rule reduces the 2021 NO<sub>x</sub> Ozone Season budget for Indiana from 13,313 to 9,754 tons of NO<sub>x</sub> by 2024 forcing optimization of existing controls; and more stringent federal wastewater guidelines have become more of a contributing factor in causing EGUs to move away from coal or shut down. The new wastewater regulations require power plants to clean coal ash and toxic heavy metals such as mercury, arsenic, and selenium from plant wastewater before it is dumped into streams and rivers. Additional emission control measures and potential future reductions will continue to be appropriately evaluated in upcoming implementation periods.

#### Comment 4

Please indicate which, if any, of the retirements are federally enforceable and planned for inclusion in the long-term strategy (LTS) and SIP. Please describe the regulatory mechanisms IDEM uses to ensure retirements and shutdowns are federally enforceable and permanent.

#### Comment 5

For these planned retirements, if IDEM chose to perform four-factor analyses on EGUs, IDEM could fully support its assertion that new emission control equipment is not cost-effective, if that is ultimately the case. A cost-effectiveness analysis within a four-factor analysis would provide actual data to support (or refute) this claim. If the State is relying on anticipated source shutdowns as part of its long-term strategy for making reasonable progress, IDEM must make these planned retirements enforceable in the SIP. This includes reliance on shutdowns both to forgo a four-factor analysis and to shorten the remaining useful life of a source in conducting a four-factor analysis. See EPA Clarifications Memo at 10; see also Guidance at 20 and 34. If IDEM does not include these retirements in its SIP, then the State should consider a four-factor analysis for these sources.

Without the four-factor analyses, the reference to “cost-effective method” on page 57 of the draft noted above offers no support for the argument that “additional emissions reductions through the use of new emission control equipment or emissions limitations is not desired”. Further, decreasing emissions trends do not free the state from an obligation to meet the CAA and Regional Haze Rule requirements to consider what is necessary for reasonable progress, which may in fact be “new emission control equipment or emissions limitations.”

#### Comment 7

There are various instances throughout the four-factor analyses where IDEM concludes that X (one of the sources) has “no reasonable set of NO<sub>x</sub> emission control measures beyond what is currently installed and operated for these emission units” or “[X] already utilizes [Y] as an existing NO<sub>x</sub> emission control measure.” However, IDEM should take its analysis one step further and indicate whether those conclusions mean that they are determining that existing measures are necessary for reasonable progress. As a general matter, EPA believes that existing measures are necessary for reasonable progress and therefore must be incorporated into the regulatory portion of the SIP. However, the state may make a weight-of-evidence

demonstration that a particular existing measure is not necessary for reasonable progress. See July 8, 2021, Clarification Memo 8-10.

#### Comment 9

Is there an enforceable prohibition on coal burning at the source or is it now physically impossible to use coal as a fuel source in the future?

#### Responses 4, 5, 7, and 9

Indiana received numerous comments related to including permanent and enforceable emission limits for existing and new emission controls that are necessary to make reasonable progress in the SIP as part of the state's long-term strategy. IDEM doesn't agree that the state should require stricter enforceable limits through secondary (welfare) control programs than those required to address health-based primary standards unless needed to show visibility improvements. The implementation of health-based primary air quality standards, such as the 2008 1-hour SO<sub>2</sub>, the 2012 fine particulate matter standard and the 2015 ozone standard have forced sources to meet new air quality targets that require them to maintain stricter control of NO<sub>x</sub> and SO<sub>2</sub> emissions. Whether through source-specific limits that are permanent and federally enforceable, or through federally enforceable programs to address interstate transport, these emission reductions have contributed to the significant progress made over the course of the first implementation period.

It should be noted that to incorporate new emission limits into Indiana's SIP, a new rule must be developed and adopted. The state's rulemaking process takes three to four years to complete, including federal SIP approval. This process would be very resource intensive for what would amount to small visibility benefits for the non-EGUs and a limited amount of time before the units are no longer operated for the EGUs.

Indiana also received a number of comments concerning the weight of evidence demonstration for existing controls. The EPA and other commenters contend that if IDEM concludes that the existing controls at a selected source are necessary to make reasonable progress, a weight-of-evidence demonstration must be conducted to establish emission limits for the existing controls. As previously mentioned, the cost and use of resources and time required to evaluate selected sources for permanence of existing controls and emission limits compared to the visibility benefits realized to address transported NO<sub>x</sub> and SO<sub>2</sub> emissions at this time is not warranted.

The RH Rule was designed to be implemented with respect to reasonable visibility progress to natural conditions by the year 2064 with several implementation periods to measure and assess reasonable progress towards the natural visibility conditions. The uniform rate of progress (URP) for each Class I area, especially in the eastern half of the country, shows the visibility progress made during the last implementation period represents another positive step towards attaining natural conditions at all Class I areas by 2064, if not much sooner. A comparison of visibility impairment values over time is an appropriate measure to determine if improvements or progress is made for Class I area visibility. The URP is adjusted to account for several different factors that make up visibility impairment. The fact that the most current monitored and modeled visibility values are below the uniform path to natural visibility conditions for eastern U.S. Class I areas must be considered in establishing Indiana's long-term strategy for the RH SIP second implementation period. Furthermore, the fact that monitored visibility data from the IMPROVE monitoring network has shown progress from 2000 to 2018 is considerable, indicating states have been responsive to reducing emissions through state and federal regulatory measures and as a result, visibility impairment is trending downward. Current 2018 monitored visibility data nearly match the projected modeled visibility values for 2028 at most

Class I areas throughout the eastern U.S. This clearly shows tremendous progress, ranging up to 10 years ahead of what is projected through visibility modeling. These visibility benefits are expected to continue with anticipated future reductions in emissions.

Some commenters provided additional information on individual EGUs and/or information that could be used in a four-factor review that IDEM cannot agree or disagree with because no four-factor review for EGUs was conducted. Many controls are already in place for EGUs, and the RH SIP includes the level of efficiency obtained by each control (as shown in Appendix F of the RH SIP). Regional Haze does not require a specific level of control and many of the control efficiencies of controls on Indiana sources are considered at a high level of control.

Indiana has determined existing emission controls are adequate to address regional haze for sources throughout the state based on the tremendous visibility progress made to date along with current “on-the-books” regulatory measures. Both factors (emissions and visibility impairment) are addressed in Indiana’s RH SIP with future emission reductions anticipated. These reductions will be appropriately evaluated in upcoming implementation periods as the natural visibility goals are realized by 2064.

#### Comment 6

IDEM should specifically address whether the cost-effectiveness of the \$1679/ton control option for SNCR is reasonable and make a specific finding as to the Greencastle facility regarding whether new controls will be required for reasonable progress.

#### Comment 8

As with the other four-factor analyses, IDEM does not appear to make specific findings for each facility of whether the cost effectiveness of the controls evaluated is reasonable. Somewhere in the SIP document, such as Section 26.0 Decision on What Control Measures are Necessary to Make Reasonable Progress, IDEM should make specific findings for each facility regarding whether the cost effectiveness for a new control option within a certain range is reasonable and if it will be required for reasonable progress. As to the cost effectiveness of controls for the Burns Harbor emission units of \$4,000/ton SO<sub>2</sub>, IDEM would be expected to address the reasonableness of options in this range.

#### Comment 10

IDEM should specifically address cost-effectiveness estimates in this range and make a specific finding for the facility regarding whether these costs are reasonable and if they will be required for reasonable progress.

#### Comment 11

If IDEM determines that no additional (i.e., new) measures are necessary to make reasonable progress for a particular source, the State must then determine whether the source’s existing measures are necessary to make reasonable progress. See section 4 (pages 8-12) of the Clarifications Memo for information on determining when a source’s existing measures are necessary to make reasonable progress. Generally, a source’s existing measures are needed to prevent future emission increases and are thus needed to make reasonable progress. If IDEM concludes that the existing controls at a selected source are necessary to make reasonable progress, IDEM must adopt emissions limits based on those controls as part of its long-term strategy for the second planning period and include those limits in its SIP (to the extent they do not already exist in the SIP).

#### Comment 12

Section 26.1 contains IDEM's conclusions regarding the State's decision not to require additional control measures. This is the heart of IDEM's main finding, although it doesn't appear until page 225. Therefore, it would be helpful if IDEM would provide conclusions specific to the selected sources indicating what, if any, additional control measures are determined to be necessary for reasonable progress. If no additional control measures are selected by Indiana, IDEM should further explain (1) if that determination means that existing measures are necessary for reasonable progress, and (2) how a determination of no additional control measures nonetheless ensures reasonable progress is made.

#### Responses 6, 8, 10, 11, and 12

Indiana received numerous comments regarding the state's decision not to require additional controls for some of the sources selected for four-factor analysis based on the cost effectiveness result for specific units. IDEM used the Q/d analyses to quantify and consider the visibility impacts of sources at Class I areas for the purpose of selecting sources to analyze for four-factor analysis. The four-factor analysis is used to evaluate potential controls for specific pollutants emitted from individual emission units at a source to determine what controls are cost effective for reducing that pollutant. The RH Rule requires states with Class I areas to consider these factors in establishing their reasonable progress goals for reducing the impact of emissions from sources within and outside the state on visibility impairment at each Class I area within the state. However, the use of the four-factor analysis and by extension the cost effectiveness evaluation for states that do not have Class I areas for the purpose of establishing a long-term strategy is not clearly defined.

IDEM did not make a determination on whether a specific dollars/ton cost for the affected sources is cost effective because subsequent source apportionment modeling results showed that these sources would not have a measurable impact on improving visibility at Class I areas. In other words, a low-cost effectiveness value at the unit level for sources with modeled insignificant visibility impacts to Class I areas outside the state does not necessarily mean reductions will provide a measurable visibility benefit. Although the cost effectiveness evaluation of the four-factor analysis for some sources shows a low-cost value to install some new control measures, the source apportionment modeling for their associated source sectors does not show that there will be appreciable differences in visibility benefits. This lack of appreciable difference in visibility benefits is due to the significant visibility progress realized so far based on emission reductions and the distance to a Class I area and/or the amount of emissions from the four-factor source. Moreover, the variables used in the cost estimates and cost effectiveness calculations vary depending on a variety of different circumstances and are not consistent across sources. The cost and use of resources and time required to evaluate selected sources for unit-specific emission control measures compared to the visibility benefits realized to address transported NO<sub>x</sub> and SO<sub>2</sub> emissions at this time is not warranted. So, when evaluating the selected sources for additional controls, both monitored and modeled visibility benefits were strongly considered.

IDEM received numerous comments on the methods and accuracy of the four-factor analyses included in the draft SIP. IDEM appreciates the thoroughness and amount of detail that went into the review of the draft SIP. IDEM used acceptable methods to estimate costs with input and review from the subject sources. Therefore, IDEM is not updating the cost effectiveness numbers for the final SIP, unless instances of errata. Different decisions on assumptions made could change the cost per ton estimates but not in an appreciable way to change the outcome of reducing emissions enough to have a measurable impact on visibility values. Please see the four-factor analyses in Section 10, the cost estimates and cost effectiveness evaluations in



Appendices H and J, and the responses from affected sources to the Federal Land Managers comments in Appendices P-T for further detail on assumptions used in the analyses.

Indiana has determined existing emission controls are adequate to address regional haze for sources selected for four-factor analysis based on the tremendous visibility progress made to date along with current “on-the-books” state and federal regulatory measures. Both factors (emissions and visibility impairment) are addressed in Indiana’s RH SIP with future emission reductions anticipated. These reductions will be appropriately evaluated in upcoming implementation periods as the natural visibility goals are realized by 2064.

**United State Department of Interior – National Parks Service** (email from Anne M Thomas/ letter from Herbert C Frost received on November 9, 2021)

Comment 1

The NPS maintains that it is not reasonable for IDEM to exempt electric generating units (EGUs) from four-factor analyses. Regional modeling results show that Indiana EGUs contribute significantly to visibility impairment at multiple Class I areas, accounting for 7% of total visibility impact at Mammoth Cave NP. In fact, five of the top ten facilities impacting Mammoth Cave NP are Indiana EGUs. As previously shared, our analyses demonstrate there may be cost-effective controls available at several EGUs. We recommend IDEM conduct four-factor analyses for these facilities and include cost-effective controls in the regional haze SIP.

Response 1

See the “Responses 2 and 3” under the U. S. EPA summary of comments and responses section on page 1 of this document for this response.

Comment 2

Based on IDEM’s original and revised analyses, we maintain that there are cost-effective control options available at several facilities including Alcoa Warrick, Burns Harbor, and Greencastle Cement. We recommend that IDEM implement all cost-effective controls to reduce haze causing emissions.

Comment 3

Controls that we consider reasonable were rejected by IDEM as unnecessary “considering the significant progress already made towards achieving the national visibility goal.” In response, we note that the 2017 preamble to the Regional Haze Rule, the August 2019 Guidance, and the recent July 2021 clarification memorandum all clearly state that having made significant progress is not a “safe harbor” that can be used to dismiss otherwise reasonable controls (82 FR at 3099, EPA 2019 RH Guidance §II(5)(a), EPA 2021 Memo §5.4).

Comment 4

Finally, IDEM concluded that the contribution to visibility impairment from the state’s sources is not sufficient to justify additional controls. We note that the visibility benefit of emissions reductions from individual facilities is not one of the four statutory factors that should be considered to determine whether controls are reasonable and should not be used to reject reasonable controls (Clean Air Act §7491, 40 CFR 51.308(f)(2)(ii), EPA 2021 Memorandum §5.2).

Responses 2, 3, and 4

See “Responses 6, 8, 10, 11, and 12” under the U. S. EPA summary of comments and responses section on page 6 of this document for this response.

**Visibility Improvement State and Tribal Association of the Southeast (VISTAS) Member States: Tennessee** (email from James Johnston received on November 4, 2021) **and North Carolina** (email from Randy Strait received on November 10, 2021)

Comment

In Section 8.0 and Appendix D of the draft SIP, IDEM discussed the substantial decrease in EGU NO<sub>x</sub> and SO<sub>2</sub> emissions from Indiana's EGUs, including specific information for Gibson and Rockport, between 2007 and 2019 and the additional projected decreases for 2028. Those sections of the RH SIP also indicate that IDEM's projected 2028 emissions for Gibson and Rockport are similar to VISTAS 2029 projections.

Since IDEM's projected 2028 emissions are similar to those provided by VISTAS and IDEM has not provided information to counter the NCDAQ's and VISTAS finding that Gibson and Rockport significantly impact visibility impairment at Great Smoky Mountains National Park and Joyce-Kilmer-Slickrock Wilderness Area, the NCDAQ requests that IDEM include four-factor analyses for both of these facilities in their final Regional Haze SIP for the second implementation period. Alternatively, IDEM could include an effectively controlled analysis or anticipated shutdown information for one or both of these facilities.

Response

IDEM has drafted a formal response to the VISTAS interstate consultation letter, which will be completed and sent to VISTAS and its member states and tribal organization after IDEM has completed its work on the draft Indiana RH SIP for the second implementation period. See IDEM's formal response to the VISTAS Inter-RPO Ask in Appendix AA of this document.

**Mid-Atlantic/Northeast Visibility Union (MANE-VU)** (email from Paul Miller received on November 5, 2021) **and Member State New Jersey** (email from Sharon Davis received on November 1, 2021)

MANE-VU Inter-Regional Planning Organization (RPO) Ask

MANE-VU's technical analysis identified visibility-impairing emissions from Indiana and other upwind states as reasonably anticipated to contribute to visibility impairment at MANE-VU Class I areas. Based on this analysis, MANE-VU developed a "MANE-VU Ask" that was sent to Indiana and the other identified states with five requests for consideration during the upwind states' second regional haze SIP planning effort. With this letter, MANE-VU is providing our overarching perspective on how well IDEM's draft addresses each of these requests. MANE-VU makes note of the past and future EGU retirements and emissions reductions described in Sections 8.1.1 and 8.3 of IDEM's draft. Nevertheless, MANE-VU respectfully requests that its Ask items be addressed in IDEM's regional haze SIP as described in the comments that follow.

Ask #1

EGUs ≥ 25 MW with installed controls, ensure that controls are run year-round. IDEM's draft SIP does not address MANE-VU Ask #1. As described in Section 7.4 of the IDEM draft, IDEM has elected to defer analysis of its EGU sector until the third implementation period. While the workload distribution of source category analysis to different implementation periods is allowed under EPA guidance, IDEM's approach of deferring analysis of its EGU sector is inconsistent with MANE-VU's Inter-RPO Ask for the second implementation period. To this end, MANE-VU notes the Indiana EGU emissions reductions that occurred between 2009 and 2019 as described in Section 8 of IDEM's draft. Nevertheless, MANE-VU reiterates its request that IDEM pursue enforceable mechanisms to ensure that EGUs ≥ 25 MW with installed controls run those controls year-round.

#### *Ask #2*

For emissions sources having a 3.0 Mm-1 impact or greater at MANE-VU Class I areas, perform a four-factor analysis. The IDEM draft does not address MANE-VU Ask #2. The Indiana Michigan Power Company (dba American Electric Power) Rockport Plant (Facility ID 6166) was identified by MANE-VU technical analysis as a facility with the potential for 3.0 Mm-1 impact or greater at one or more of MANE-VU's Class I areas. MANE-VU notes the emissions controls and reductions for the Rockport Plant discussed in Section 8.5 of the IDEM draft, including the continuous operation of SCRs and enhanced DSI systems. Nevertheless, MANE-VU respectfully requests that a four-factor analysis be performed for the Rockport Plant, consistent with MANE-VU's Ask #2, to determine the reasonableness of more stringent control efficiencies or stricter emissions limits.

#### *Ask #3*

Adopt an ultra-low sulfur fuel oil standard. The IDEM draft does not address the MANE-VU ultra-low sulfur fuel oil Ask. MANE-VU respectfully re-iterates its request that Indiana adopt ultra-low sulfur fuel oil standards as part of its long-term strategy or demonstrate in its SIP why it would not be feasible to do so. For distillate oil, this would be essentially the equivalent of on-road diesel, which is already widely available. We note that all MANE-VU states have successfully adopted low sulfur fuel oil requirements.

#### *Ask #4*

For EGUs and other large sources, pursue enforceable mechanisms to lock in lower emission rates. MANE-VU notes the EGU emissions reductions described in Section 8 of the IDEM draft, including those that have come about via enforceable mechanisms, such as consent orders. However, IDEM does not directly address MANE-VU's Ask #4 in its draft SIP.

#### *Ask #5*

Encourage and promote energy efficiency and clean technologies. The IDEM draft does not address Ask #5. MANE-VU respectfully asks that IDEM consider, and report in its SIP, measures or programs in Indiana that reduce emissions by encouraging energy efficiency and promoting cleaner energy technologies. Rather than a focus on energy markets, this would be a discussion within IDEM's haze SIP of the energy efficiency measures and clean energy programs under consideration or currently operating in Indiana. Unlike MANE-VU's other Ask items, MANE-VU does not necessarily intend that these measures be enforceable or included as part of a state's long-term strategy. But because such programs can reduce emissions and therefore benefit visibility, MANE-VU is asking its upwind state partners to consider and report such measures in their haze SIPs.

#### Response to MANE-VU Inter-RPO Ask

IDEM has drafted a formal response to the MANE-VU Inter-RPO Ask, which will be finalized and sent to MANE-VU and its member states and tribal organizations after IDEM has completed its work on the draft Indiana RH SIP for the second implementation period. See IDEM's formal response to the MANE-VU Inter-RPO Ask in Appendix AA of this document.

#### *MANE-VU Section-Specific Comments*

##### Comment 1

##### 7.3 Q/d Screening Analysis for Source Selection

MANE-VU respectfully asks IDEM to describe in its SIP the technical basis for selecting 5 as the Q/d screening threshold for screening sources.

#### Response 1

As described in Section 7.3 of the SIP, the Q/d threshold value of 5 was chosen due to the number of sources that met this criterion and the commitment among LADCO member states to be consistent in their decision making throughout the SIP development process. Indiana believed that evaluating the 20 highest emitting sources of NO<sub>x</sub> and SO<sub>2</sub> pollution in the state would provide an adequate and representative number of sources to be evaluated and observed that most of the other LADCO states choose a similar number of sources for evaluation.

#### Comment 2

##### 23.1 Class I Area Selection

At the bottom of page 199, below Table 23-2, the text states, “Results for all Class I areas analyzed show 2014-2018 baseline monitored values, as determined through the IMPROVE monitoring data, are lower than the modeled visibility impacts at each Class I area for 2028, based on the 2011 emissions[.]” Although this statement is true for some of the Class I areas shown in Table 23-2, it does not appear to be true for many others.

#### Response 2

This is correct; therefore, the sentence this comment refers to has been changed from all Class I areas to most Class I areas.

#### Comment 3

##### 23.11 Brigantine Natural Wilderness Area, NJ; and Lye Brook National Wilderness Area, VT (MANE-VU)

This section asserts that “on-the-books” measures, along with federal measures, are such that the meeting of reasonable progress goals (RPGs) will not be impeded. This section concludes that, as a result, no further analysis for this SIP will be taken. MANE-VU does not challenge the assertion that the meeting of RPGs will not be impeded but re-iterates the fact that RPGs themselves are not enforceable and that the overarching goal of CAA 169A and the regional haze rule is to make progress towards the goal of natural visibility conditions by 2064. As emissions sources such as EGUs become better controlled, smaller additional emissions reductions from these sources, or emissions reductions from other source types, become necessary to make incremental improvements in visibility and to ensure that downward trends in monitored visibility metrics continue. Therefore, MANE-VU further re-iterates its request that IDEM do additional work and analysis to ensure that MANE-VU’s Inter-RPO Ask is addressed in its SIP such that incremental progress is made at MANE-VU Class I areas affected by Indiana emissions.

#### Response 3

See “Response 2 and 3” under the U. S. EPA summary of comments and responses section on page 1 of this document for this response.

#### Comment 4

##### 25.0 20% CLEAREST DAYS ANALYSIS

The first sentence in this section states, “Results for all Class I areas analyzed show 2014-2018 baseline monitored values, as determined through the IMPROVE monitoring data, are lower than the modeled visibility impacts at each Class I area for 2028, based on the 2011 emissions[.]” Although this statement is true for almost all of the Class I areas shown in Table 25-1, it does not appear to be true for Isle Royale, Brigantine, and Lye Brook.

#### Response 4

This is correct; therefore, the sentence this comment refers to has been changed from all Class I areas to most Class I areas.

**New Jersey** (email from Stella Oluwaseun-Apo received on November 1, 2021)

#### Response to New Jersey Specific Comments

New Jersey is a MANE-VU member state. Comments included in the state's correspondence are also included in the MANU-VU correspondence; therefore, responses to New Jersey specific comments can be found in IDEM's formal response to the MANE-VU Inter-RPO Ask. See IDEM's formal response to the MANE-VU Asks in Appendix AA of this document.

**Duke Energy** (email from Aaron Flynn received on November 15, 2021)

#### Comment 1

It is important to note that the units are subject to the Mercury and Air Toxics Rule Subpart UUUUU, which requires that the installed emission controls be operated at all times coal is burned and which uses SO<sub>2</sub> reductions as a surrogate for acid gases. The Draft SIP should reflect this.

#### Response 1

Comment 1 has been incorporated into the Draft SIP under Section 9.3.

All other comments in Duke Energy's comments document were found to be in line with the points IDEM already makes in one form or another for the EGU source sector in the Draft SIP. Therefore, these comments were not incorporated into the Draft SIP because IDEM prefers the existing language as it is throughout the document.

**United States Steel Corporation (US Steel), Gary Works** (email from Jacob Blahut received on November 15, 2021)

IDEM appreciates the comments submitted by US Steel in support of Indiana's draft RH SIP, which do not require a response from IDEM. A copy of the comments submitted can be found in Appendix Y.

**Alcoa Warrick Operations** (email from Thomas Shaw received on November 3, 2021)

#### Comment 1

Alcoa would like to correct the cost effectiveness numbers for the Flue Gas Desulfurization for Potlines 2-6 which is \$16,800 per ton and the Anode Baking Ring Furnace which is \$45,500 per ton as noted on page 2 of the August 13, 2021, report from Burns & McDonnell.

#### Response 1

The cost effectiveness numbers for Potlines 2-6 and the Anode Baking Ring Furnace were corrected in the Indiana RH SIP for the Second Implementation Period document and Appendix J.

**Buzzi Unicem USA (Buzzi Unicem)** (email from Michelle Ferguson received on November 15, 2021)

Comment 1

The comments submitted by Buzzi Unicem relate to the different pollution control measures chosen for four-factor analysis, the percentage of control attributed to those measures, and the feasibility of installing them on the cement kilns at the Greencastle facility. The Buzzi Unicem's comments also explain how the cost information in the cost estimate and cost effectiveness evaluation don't accurately represent the costs associated with installing the controls evaluated on the Greencastle cement kilns.

Response 1

IDEM requested cost information from Buzzi Unicem to assist with developing cost estimates for potential control measures evaluated for the Greencastle cement kilns. However, the source had not invested any resources or time into developing information related to upgrades to existing pollution control systems or the installation of new pollution control systems on the cement kilns that would be helpful to IDEM in developing the cost estimates for controls. Therefore, IDEM prepared a more general analysis of the potential controls and costs to install them for the Greencastle kilns using existing information available to the agency.

IDEM used the LADCO whitepaper procured for LADCO member states to use in developing their four-factor analyses for the second implementation period; the cement kiln control device information collected and shared by the Federal Land Managers; and the cost estimate information provide by Lehigh for SNCR and SCR control systems to develop the four-factor analyses for the cement kiln source category and the source-specific analysis for the Greencastle cement kilns. IDEM acknowledges that the information interpolated from the cost estimates are not precise estimates specific to the Greencastle kilns; however, the information provided in the Buzzi Unicem comments submitted do not provide enough source-specific information to develop more accurate cost estimate information or decisively determine the feasibility of the controls evaluated. Therefore, Buzzi Unicem's comments are appreciated and included in Appendix W; but no changes will be made to the cement kiln four-factor analysis as a result of the source's comments.

**Lehigh Hanson, Inc. (Lehigh)** (email from Adam N. Swercheck received November 12, 2021)

A four-factor analysis for the Lehigh Mitchell facility was not conducted due to the fact that the company was issued a Title V permit and is in the process of constructing a new state-of-the-art facility to replace the old facility. The details of Lehigh's plans for the new facility are included in the RH SIP, therefore the company's comments are appreciated and included in Appendix W; but no changes will be made to the cement kiln four-factor analysis as a result of the source's comments.

**Indiana Energy Association (IEA)** (email from Mindy Westrick Brown received on November 12, 2021)

IDEM appreciates the comments submitted by IEA in support of Indiana's draft RH SIP, which do not require a response from IDEM. A copy of the comments submitted can be found in Appendix Y.

**National Parks Conservation Association (NPCA)** (email from Colin Deverell received on October 28, 2021)

Comment 1

Fully analyze reasonable progress emission controls for all coal plants in the state in this planning period. It is commonplace for coal plants to have scrubbers that reduce upwards of 98% of SO<sub>2</sub> emissions and selective catalytic reduction systems to reduce 95% of emissions of NO<sub>x</sub>. Indiana cannot disregard these controls or upgrades to those facilities that already have them installed with weak performance.

Response 1

See the “Responses 2 and 3” under the U. S. EPA summary of comments and responses section on page 1 of this document for this response.

Comment 2

Evaluate all applicable controls for non-power plant sources and correct the cost of controls calculations.

Response 2

See “Responses 6, 8, 10, 11, and 12” under the U. S. EPA summary of comments and responses section on page 6 of this document for this response.

Comment 3

Thoroughly assess environmental justice impacts.

Response 3

The impact of emission sources on regional haze occurs downwind and the Regional Haze Rule addresses visibility impacts on Class I areas. Therefore, Indiana’s RH SIP is only addressing emissions and visibility impacts on surrounding Class I areas. As U.S. EPA continues to evaluate environmental justice issues and how states can consistently and equitably address these issues, Indiana will continue to base its regulatory and permitting decisions on existing federal and state regulations that are protective of all Indiana citizens in all areas of the state.

Comment 4

Set enforceable retirements for any sources being counted on for pollution reduction.

Response 4

See “Responses 4, 5, 7, and 9” under the U. S. EPA summary of comments and responses section on page 4 of this document for this response.

**Sierra Club** (email from Rebecca Dien-Johns received on October 28, 2021)

Comment 1

Require polluters to reduce harmful air pollution, more specifically sulfur dioxide and nitrogen oxides, to protect visibility at our national parks and the public health of Hoosiers.

Responses 1

Table 8-4 of Indiana’s RH SIP details the projected emissions reductions anticipated for NO<sub>x</sub> emissions of 59% and SO<sub>2</sub> emissions of 52% from EGUs. This is a result of retirements of EGU boilers and federal regulations that have already gone into effect. Overall, all anthropogenic emissions from Indiana are projected to decrease by 42% of NO<sub>x</sub> from 2016 to 2028 while SO<sub>2</sub>

emissions will decrease by 32%, as described in Indiana's RH SIP, Section 5.15. These reductions will continue to improve visibility impairment at Class I areas as well as keep air quality throughout Indiana well below health-based air quality standards.

**Sierra Club, National Parks Conservation Association, The Coalition to Protect America's National Parks, Just Transition Northwest Indiana, Hoosier Environmental Council, Izaak Walton League, and Save the Dunes** (email from Tony Mendoza received on November 15, 2021)

Comment 1

IDEM arbitrarily and unlawfully failed to conduct reasonable progress analyses or consider emissions reductions for many of the state's largest sources of visibility impairment, including the entire electric generation unit ("EGU") sector.

Comment 2

Rather than conduct four-factor analyses for Indiana's EGUs, as required by the Clean Air Act and the Regional Haze Rule, IDEM impermissibly relied on unenforceable and unverifiable emission reductions from planned retirements or reductions in utilization at Indiana EGUs.

Comment 3

IDEM impermissibly exempts EGUs from further control analysis based on the state's purported compliance with the Uniform Rate of Progress.

Comment 4

The proposed SIP fails to properly establish reasonable progress goals and fails to consider the statutory reasonable progress factors for EGUs, and instead relies on factors that Congress did not intend for states to consider to exempt those sources from reasonable, cost-effective controls.

Comment 6

IDEM's control evaluation for the state's EGU sector fails to satisfy the Regional Haze Rule's requirement that the state include the "robust" technical demonstration showing that no additional controls are reasonable.

Comment 7

As explained below and in the attached Kordzi Report, IDEM failed to evaluate cost-effective and achievable emission reductions for several of Indiana's largest sources, including Gibson, Rockport, Warrick, Clifty Creek, Petersburg, Cayuga, and A.B. Brown. If the state had conducted four-factor analyses for those sources, it is clear that cost-effective controls are available.

Responses 1, 2, 3, 4, 6, and 7

See "Responses 2 and 3" under the U. S. EPA summary of comments and responses section on page 1 of this document for this response.

Comment 5

IDEM improperly defers making any four-factor determinations based on purported emission reductions from existing Clean Air Act programs.



#### Comment 8

For the sources for which IDEM did include four-factor analyses, the agency cherry picked emitting units from the facilities and did not consider all emitting units.

#### Comment 9

IDEM's analyses for control analyses for the following seven sources, Greencastle facility, Indiana Harbor East and West Steel Mills Burns Harbor Steel Mill, U.S. Steel Gary Facility, SABIC Plastics, Warrick Newco (formerly Alcoa Warrick) and Cokenergy, rely on inaccurate and missing information, inflated costs and shortened useful life factors and otherwise are woefully inadequate and fundamentally inconsistent with the Clean Air Act and the Regional Haze Rule.

#### Comment 10

IDEM failed to consider all emission control options for those sources evaluated, including the most stringent measures.

#### Comment 11

IDEM's proposed SIP fails to include documentation necessary to independently review the availability of cost-effective controls.

#### Response 5, 8, 9, 10, and 11

See "Responses 6, 8, 10, 11, and 12" under the U. S. EPA summary of comments and responses section on page 6 of this document for this response.

#### Comment 12

IDEM's interstate consultation is inconsistent with the requirements of the Regional Haze Rule.

#### Response 12

IDEM has acknowledged receipt of the asks received by other regional planning organizations and individual states. However, due to the delay in receiving the results from LADCO's source apportionment modeling until June of 2021, IDEM decided to complete development of Indiana's its RH SIP and then submit the interstate consultation responses along with the final SIP to EPA. IDEM's interstate consultation responses are included in Appendix AA of the final submittal.

#### Comment 13

IDEM must reevaluate, consider and incorporate the Federal Land Managers' comments.

#### Responses 13

IDEM summarized and addressed the Federal Land Managers comments in Appendix U and the agency's responses to issues raised by the Federal Land Managers are consistent with IDEM's responses to other similar comments received during the public comment period.

#### Comment 14

The proposed SIP fails to evaluate environmental justice or disproportionately impacted communities' impacts, resulting in a proposed SIP that does not reduce emissions and minimize harms to environmental justice and other disproportionately impacted communities, as strongly encouraged by the EPA's clarifying memo.

#### Response 14

While environmental justice (EJ) is an important issue and should be addressed on a case-by-case basis, regional haze addresses the formation of haze from secondary pollutants of which this formation occurs from photochemical reactions. These photochemical reactions can take place several if not hundreds of kilometers away from an emission source. Prevention of Significant Deterioration (PSD) and associated modeling tools are more appropriate regulatory mechanisms to address EJ. EJ should not be a consideration in determining long term strategy decisions for regional haze.

#### *Clarification Responses to statements made in the Sierra Club Comments*

##### 1<sup>st</sup> Statement on Pg. 10, Section II

Based on 2016 emissions, IDEM established screening threshold Q/d value of 5 to screen out sources with either low emissions or located at far distances from Class I areas that would not have visibility impacts.

##### Clarification Response to 1<sup>st</sup> Statement

IDEM used 2018 emissions to conduct its Q/d screening, as stated in the draft RH SIP, page 43.

##### 2<sup>nd</sup> Statement on Pg. 46, Section III.A

Only Missouri and Arkansas were consulted.

##### Clarification Response to 2<sup>nd</sup> Statement

IDEM consulted with VISTAS and MANE-VU over the course of the SIP document development period. IDEM has evaluated its visibility impacts on all Class I areas in the eastern half of the United States. Specific responses to each state and multi-jurisdiction organization areas, in which consultation occurred, are included in the final SIP.

##### 3<sup>rd</sup> Statement on Pg. 46, Section III.A

IDEM must re-initiate consultation with Missouri since Graph 23-18 shows the modeled visibility impact at Mingo for 2028 appears on the unadjusted glidepath for 2028.

##### Clarification Response to 3<sup>rd</sup> Statement

The glidepath charts are graphical representations of modeled and monitored results for each Class I area. The URP is the uniform rate of visibility progress in which 2000-2004 represents the baseline period of the URP and 2064 represents the endpoint where the deciview value of the URP is assumed for the purpose of analysis to reach natural visibility conditions. The line between 2000 and 2064 is the graphical representation of this data. IDEM reviewed the LADCO modeling output that determined the URP and the modeled URP value for 2028 was calculated at 19.44 deciviews. Therefore, the modeled visibility impairment value for Mingo of 18.94 deciviews is 0.5 deciviews below the 2028 URP value of 19.44 deciviews. Since the modeled visibility value is below the URP for Mingo, a “robust demonstration” is not required. LADCO’s modeled output can be found in association with the LADCO “Modeling and Analysis for Demonstrating Reasonable Progress for the Regional Haze 2018-2028 Planning Period - Technical Support Document” as listed in Appendix L of the RH SIP.

4<sup>th</sup> Statement on Pg. 55, Section V

Sierra Club stated Indiana ranks #1 in toxics releases per square mile.

Clarification Response to 4<sup>th</sup> Statement

U.S. EPA's Toxic Release Inventory (TRI) reporting incorporates releases into the air, water, land disposal or transferred off-site for disposal. Indiana's total toxic air releases are only a portion of this total and have consistently declined by nearly 70% since 2006 with continued reductions in air toxics anticipated.

5<sup>th</sup> Statement on Pg. 56, Section V

Sierra Club stated according to EPA, U.S. Steel - Gary Works is the state's top polluter, producing 22.5 million pounds of pollutants.

Clarification Response to 5<sup>th</sup> Statement

U.S. EPA's TRI reporting incorporates releases into the air, water, land disposal or transferred off-site for disposal and the air emissions portion of U.S. Steel's releases were 312,203 pounds, accounting for 1.4% of its total releases.

**General Public Comments**

*Numerous emails were received from individuals who made the same general comments summarized below.*

Comment 1

Indiana's RH SIP contains no new reductions in pollution.

Comment 2

Indiana's RH SIP plan must require polluters to reduce SO<sub>2</sub>/NO<sub>x</sub>

Response 1 and 2

Table 8-4 of Indiana's RH SIP details the projected emissions reductions anticipated for NO<sub>x</sub> emissions of 59% and SO<sub>2</sub> emissions reductions of 52% from EGUs. This is, in part, a result of retirements of EGU boilers and federal regulations that have already gone into effect. Overall, all anthropogenic NO<sub>x</sub> emissions from Indiana are projected to decrease by 42% from 2016 to 2028 while all anthropogenic SO<sub>2</sub> emissions will decrease by 32% over the same time period, as described in Indiana's RH SIP, Section 5.15.

Comment 3

Indiana's RH SIP fails to make reasonable progress at Class I areas and is woefully inadequate.

Comment 4

Set enforceable retirements for any source the state is counting on for pollution reduction.

Response 3 and 4

See "Responses 4, 5, 7 and 9" under the U. S. EPA summary of comments and responses section on page 4 of this document for this response.

Comment 5

Indiana's RH SIP fails to require cost-effective controls/enforceable retirements.

Comment 6

Evaluate all applicable controls for non-power plants and correct cost analysis.

Comment 7

Require US Steel and Alcoa to reduce pollution and protect parks and public health.

Response 5, 6, and 7

See "Responses 6, 8, 10, 11, and 12 under the U. S. EPA summary of comments and responses section on page 6 of this document for this response.

Comment 8

Fully analyze emission controls for all coal plants in the state.

Comment 9

Require Gibson and Petersburg to reduce pollution and protect parks and public health.

Response 8 and 9

See "Responses 2 and 3 under the U. S. EPA summary of comments and responses section on page 1 of this document for this response.

Comment 10

IDEM should thoroughly assess environmental justice.

Response 10

Indiana assesses all areas of the state equally according to current state and federal regulations and uses all available existing data and information to determine air quality impacts. PSD and associated modeling tools are more appropriate regulatory mechanisms to address EJ issues. EJ should not be a consideration in determining long term strategy decisions for regional haze in states without Class I areas.

*Emails received from individuals who made general comments are summarized below.*

**Bill Walters**

Comment

Only Texas produces more CO<sub>2</sub> from coal than Indiana.

Response

Without proper context of the commenter's statistical reference and the source of this ranking, it is difficult to provide a direct response. IDEM retrieved U.S. EPA emissions data for states' breakdown of carbon dioxide (CO<sub>2</sub>) emissions from 2008 to 2018 (the time period for the first implementation period for regional haze) and Indiana is ranked 8th in CO<sub>2</sub> emissions nationally and 3rd among Midwest states. Indiana is trending downward over this period of time with a 16.5% drop in CO<sub>2</sub> emissions from fossil fuel combustion. [www.epa.gov/sites/default/files/2020-10/documents/state\\_co2\\_emissions\\_from\\_fossil\\_fuel\\_combustion\\_1990-2018.pdf](http://www.epa.gov/sites/default/files/2020-10/documents/state_co2_emissions_from_fossil_fuel_combustion_1990-2018.pdf). Additionally, more recent information for 2017 to 2020 from U.S. EPA's Clean Air Market Division (CAMD) shows Indiana CO<sub>2</sub> emissions from electric utilities are dropping. Comparison of 2017 to 2019 showed a 7% drop in CO<sub>2</sub> emissions while 2020 CO<sub>2</sub> emissions, no doubt impacted from Covid-19, showed a 22.7% drop, ahead of the national average decrease from 2017 to 2020 of 17%.

## **Kimberly Wellman**

### Comment

EPA's Toxic Release Inventory shows Indiana releases most chemicals per square mile (2019)

### Response

U.S. EPA's TRI reporting incorporates releases into the air, water, land disposal or transferred off-site for disposal. Indiana's total toxic air releases have consistently declined since 2006 by nearly 70% with continued reductions in air toxics anticipated.

## **Dlynn Melo**

### Comment

Hard to breath on days where temperature inversions push down smoke/haze.

### Response

IDEM would encourage all Indiana citizens refer to the SmogWatch air quality forecasting website for current and forecasted ozone and fine particulates concentrations. Air quality forecasts take into account natural pollution resulting from wildfires and desert dust events as well as weather conditions in which fine particulates or ozone develop over time in any area of the state. The SmogWatch link is <https://apps.idem.in.gov/smogwatch/Today.aspx>

## **Diana Allen**

### Comment

Worsening air pollution worsens her asthma.

### Response

Table 25-1 of Indiana's RH SIP demonstrates the vast emissions reductions realized throughout the state with reduction of NO<sub>2</sub> emissions of 65% and SO<sub>2</sub> emissions reductions equating to over 90% since 2007. IDEM would encourage the public to refer to the SmogWatch air quality forecasting website for current and forecasted ozone and fine particulates concentrations. Air quality forecasts take into account natural pollution resulting from wildfires and desert dust events as well as weather conditions in which fine particulates or ozone develop over time in an area. The SmogWatch link is <https://apps.idem.in.gov/smogwatch/Today.aspx>.

## **Thomas Sherer**

### Comment

Without sanctions and penalties, haze plan will cause more haze.

### Response

Indiana's Regional Haze SIP demonstrates tremendous emissions reductions that have greatly improved visibility at Class I areas throughout the eastern half of the country. Indiana sources' projected emissions by the year 2028 are even lower than current emissions so Indiana's visibility impacts will be even less on surrounding Class I areas.

**Sharon Smith**

Comment

Family deals with COPD which doctors say is caused by air pollution. Polluters get a free pass to pollute.

Response

IDEM would encourage the public to refer to the SmogWatch air quality forecasting website for current and forecasted ozone and fine particulates concentrations. Air quality forecasts take into account natural pollution resulting from wildfires and desert dust events as well as weather conditions in which fine particulates or ozone develop over time in an area. The SmogWatch link is <https://apps.idem.in.gov/smogwatch/Today.aspx>.

**Jim Merkle**

Comment

Concerned about continuing releases into Lake Michigan.

Response

While this does not directly relate to regional haze, IDEM's Office of Water Quality is investigating recent releases and continues to work with the responsible companies, local and county leaders and concerned citizens on addressing these incidents.

**Dania Straughan**

Comment

Pregnant mom with asthma, reduce toxic waste that she is forced to breathe.

Response

Indiana's Regional haze SIP is focused on sulfur dioxide and nitrogen oxides impacts on visibility on all federal Class I areas. It should be noted that Indiana's total toxic air releases have consistently declined since 2006 by nearly 70% with continued reductions in air toxics anticipated. IDEM would encourage all Indiana citizens to refer to the SmogWatch air quality forecasting website for current and forecasted ozone and fine particulates concentrations. Air quality forecasts take into account natural pollution resulting from wildfires and desert dust events as well as weather conditions in which fine particulates or ozone develop over time in an area. The SmogWatch link is <https://apps.idem.in.gov/smogwatch/Today.aspx>.

**Arianna Grazziani**

Comment

Current laws don't protect health and causes destruction of property.

Response

The National Ambient Air Quality Standards consist of primary and secondary standards as determined by science experts and health officials and adopted into U.S. EPA's Code of Federal Register as approved federal regulations. The secondary standards are designed to protect the public welfare from adverse effects, including those related to effects on soils, water, crops, vegetation, man-made (anthropogenic) materials, animals, wildlife, weather, visibility, and climate; damage to property; transportation hazards; economic values, and personal comfort

and well-being. Indiana is currently meeting all primary and secondary standards at all its ambient air quality monitoring sites for all criteria pollutants throughout the state.

### **Mark Nowotarski**

#### Comment

Indiana ranks #1 in toxic releases per square mile, 3rd in carbon emissions, has 5 super polluters.

#### Response

EPA's TRI reporting incorporates releases into the air, water, land disposal or transferred off-site for disposal. Indiana's total air toxic releases have consistently declined since 2006 by nearly 70% with continued reductions in air toxics anticipated. IDEM has retrieved U.S. EPA emissions data for states' breakdown of carbon dioxide (CO<sub>2</sub>) emissions from 2008 to 2018 (the time period for the first implementation period for regional haze) and Indiana is ranked 8th in CO<sub>2</sub> emissions nationally and 3rd among Midwest states. Indiana is trending downward over this period of time with a 16.5% drop in CO<sub>2</sub> emissions from fossil fuel combustion.

[www.epa.gov/sites/default/files/2020-10/documents/state\\_co2\\_emissions\\_from\\_fossil\\_fuel\\_combustion\\_1990-2018.pdf](http://www.epa.gov/sites/default/files/2020-10/documents/state_co2_emissions_from_fossil_fuel_combustion_1990-2018.pdf).

Additionally, more recent information for 2017 to 2020 from U.S. EPA's CAMD shows Indiana CO<sub>2</sub> emissions continue to drop. Comparison of 2017 to 2019 CO<sub>2</sub> emissions showed a 7% drop while 2020 CO<sub>2</sub> emissions, no doubt impacted from Covid-19, showed a 22.7% drop, ahead of the national average decrease in CO<sub>2</sub> emissions from 2017 to 2020 of 17%.

### **Linda Evinger**

#### Comment

Indiana is a polluted state which leads other companies and individuals to not locate/live in the state. Protect the bees, bats, wildlife.

#### Response

Indiana's Regional haze SIP is focused on sulfur dioxide and nitrogen oxides impacts on visibility on all federal Class I areas. Table 25-1 of Indiana's RH SIP demonstrates the vast emissions reduction realized throughout the state with reduction of NO<sub>x</sub> emissions of 65% and SO<sub>2</sub> emissions reductions equating to over 90% since 2007. It should be noted that the National Ambient Air Quality Standards consist of primary and secondary standards. The secondary standards are designed to protect the public welfare from adverse effects, including those related to effects on soils, water, crops, vegetation, man-made (anthropogenic) materials, animals, wildlife, weather, visibility, and climate; damage to property; transportation hazards; economic values, and personal comfort and well-being. Indiana is currently meeting all secondary standards for all criteria pollutants.

### **Drew Davis**

#### Comment

Protect all National Park Service sites in Indiana, Indiana State Parks and State Historical sites.

#### Response

The National Ambient Air Quality Standards consist of primary and secondary standards. The secondary standards are designed to protect the public welfare from adverse effects, including

those related to effects on soils, water, crops, vegetation, man-made (anthropogenic) materials, animals, wildlife, weather, visibility, and climate; damage to property; transportation hazards; economic values, and personal comfort and well-being. Indiana is currently meeting all secondary standards for all criteria pollutants at all ambient air quality monitors throughout the state.

**Michael Bean**

Comment

IDEM must reduce and limit SO<sub>2</sub>/NO<sub>x</sub> and increase regulations/monitoring of SO<sub>2</sub>/NO<sub>x</sub>

Response

Table 8-4 of Indiana's RH SIP details the projected emissions reductions anticipated for NO<sub>x</sub> emissions of 59% and SO<sub>2</sub> emissions of 52% from EGUs. This is a result of retirements of EGU boilers and federal regulations that have already gone into effect. Overall, all anthropogenic emissions from Indiana are projected to decrease by 42% of NO<sub>x</sub> emissions from 2016 to 2028 while SO<sub>2</sub> emissions will decrease by 32%, as described in Indiana's RH SIP, Section 5.15. As such, Indiana has determined that current "on-the-books" regulatory measures and monitoring of NO<sub>x</sub> and SO<sub>2</sub> emissions are adequate to address regional haze for sources throughout the state based on the tremendous visibility progress made to date. NO<sub>x</sub> and SO<sub>2</sub> emissions are addressed in Indiana's RH SIP with future emission reductions anticipated.

**Richard Hill**

Comment

Maintain clean natural views/healthy, breathable air. Lives near Clifty Creek which needs to comply with regulations

Response

IDEM compliance staff have confirmed that Clifty Creek complies with its permit conditions and meets compliance and monitoring requirements. There have been no excess emissions issues from the facility and Clifty Creek submits timely monitoring and compliance reports.

**Susan Thomas**

Comment

Photosynthesis is disrupted, and native plants are damaged.

Response

The National Ambient Air Quality Standards consist of primary and secondary standards. The secondary standards are designed to protect the public welfare from adverse effects, including those related to effects on soils, water, crops, vegetation, man-made (anthropogenic) materials, animals, wildlife, weather, visibility, and climate; damage to property; transportation hazards; economic values, and personal comfort and well-being. Indiana is currently meeting all secondary standards for all criteria pollutants throughout the state.