



VIA ELECTRONIC MAIL

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**RE: Sierra Club and National Parks Conservation Association Comments on Louisiana Department of Environmental Quality's ("LDEQ") Proposed State Implementation Plan ("SIP") for Regional Haze Program for the Second Implementation Period, LDEQ AI# 174156 [LDEQ 2104Pot1, Doc. ID No. 12656414 (Apr. 20, 2021)]**

Dear Ms. Johnson and Ms. Hayes,

Please accept these comments submitted on behalf of Sierra Club and National Parks Conservation Association ("Conservation Organizations") regarding the Louisiana Department of Environmental Quality's ("LDEQ's") proposed State Implementation Plan ("SIP") for the Clean Air Act Regional Haze Program for the Second Implementation Period LDEQ AI# 174156 [LDEQ 2104Pot1, Doc. ID No. 12656414 (Apr. 20, 2021)].<sup>1</sup> We incorporate by reference and are attaching three technical reports: (1) Victoria R. Stamper, "Review and Comments on Reasonable

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<sup>1</sup> Although the original notice for this proposal included a June 11, 2021 comment deadline, LDEQ extended the deadline until July 12, 2021. See LDEQ AI# 174156, Doc. ID No. 12736261 (May 25, 2021).

Progress Four-Factor Analyses for Sulfur Dioxide and Nitrogen Oxide Pollution Controls Evaluated as Part of the Louisiana Regional Haze Plan for the Second Implementation Period” (July 8, 2021) [“Stamper Report”]; (2) D. Howard Gebhart, “Technical Review of Visibility Modeling for the Second Round of Regional Haze State Implementation Plans: State of Louisiana” (July 2021) [“Gebhart Report”]; and (3) Vicki Stamper & Megan Williams, “Oil and Gas Sector Reasonable Progress Four-Factor Analysis of Controls for Five Source Categories” (Mar. 6, 2020).

As explained in detail below, we have serious concerns regarding LDEQ’s proposed Regional Haze SIP for the Second Implementation Period. In addition to the errors identified in the attached Stamper and Gebhart Reports, LDEQ must correct the following flaws:

- LDEQ did not conduct reasonable progress analyses or consider emissions reductions for key sources contributing to visibility impairment. Instead, LDEQ simply attaches four-factor analyses conducted by the regulated facilities, which are woefully inadequate and fundamentally inconsistent with the Clean Air Act and the Regional Haze Rule
- LDEQ’s proposed SIP fails to include any independent, critical review of the utilities’ analyses. Given LDEQ’s lack of analysis and its failure to include specific emission limits (and sufficient information to support those limits), EPA cannot approve the SIP revision.
- LDEQ erroneously relied on unenforceable and unverifiable emission reductions.
- LDEQ improperly defers making any four-factor determinations based on purported emission reductions from existing Clean Air Act programs
- The SIP fails to properly establish reasonable progress goals and fails to evaluate whether additional emission reductions from non-BART sources are necessary to ensure reasonable progress toward the Clean Air Act’s visibility goal.
- As explained below and in the attached Stamper and Gebhart Reports, LDEQ must reevaluate cost-effective and achievable emission reductions for several of Louisiana’s largest sources, including R.S. Nelson, Big Cajun II, Brame Energy Center, and Ninemile Point.
- LDEQ’s interstate consultation is inconsistent with the requirements of the Regional Haze Rule, in several respects.
- LDEQ’s consultation with the Federal Land Managers is similarly flawed and incomplete.
- The SIP fails to evaluate environmental justice impacts, resulting in a proposed SIP that does not reduce emissions and minimize harms to disproportionately impacted communities.

As it currently stands, LDEQ’s Regional Haze SIP does not meet the legal requirements of the Clean Air Act or federal regulations, and therefore cannot be

approved by EPA. We urge LDEQ to revise the plan to address the fundamental flaws identified in these comments and the attached Stamper and Gebhart Reports.

## I. LEGAL FRAMEWORK

### A. The Regional Haze Rule

The Clean Air Act establishes “as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution.” 42 U.S.C. § 7491(a)(1). To that end, EPA issued the Regional Haze Rule, which requires the states (or EPA where a state fails to act) to make incremental, “reasonable progress” toward eliminating human-caused visibility impairment at each Class I area by 2064. 40 C.F.R. § 51.308(d)(1), (d)(3). Together, the Clean Air Act and EPA’s Regional Haze Rule require states to periodically develop and implement state implementation plans (“SIPs”), each of which must contain *enforceable* “emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward the national goal.” 42 U.S.C. § 7491(b)(2); *see also* 42 U.S.C. § 7410(a)(2); 40 C.F.R. § 51.308.

The Regional Haze Rule includes several interlocking measures designed to make “reasonable progress” towards achieving the 2064 natural visibility goal. These measures include requirements to (1) develop reasonable progress goals based on the evaluation of any and all sources contributing to visibility impairment; (2) determine baseline and natural visibility conditions; (3) create a long-term strategy for making reasonable progress; and (4) implement the best available retrofit technology (BART) for some of the oldest and dirtiest sources of haze-causing pollutants. *Id.*; 40 C.F.R. § 51.308(d), (e).

One of the main features of the Regional Haze Rule is the establishment of “goals (expressed in deciviews)<sup>2</sup> that provide for reasonable progress towards achieving natural visibility conditions.” 40 C.F.R. § 51.308(d)(1). In developing “reasonable progress goals” and the emission reductions needed to meet them, the state must consider four factors: (1) the costs of compliance, (2) the time necessary for compliance, (3) the energy and non-air quality environmental impacts of compliance, and (4) the remaining useful life of any potentially affected sources. 42 U.S.C. § 7491(g)(1); 40 C.F.R. § 51.308(d)(1)(i)(A), (d)(3). Notably, the statute does *not* list visibility improvement as a fifth factor in the reasonable progress analysis, and in implementing those statutory factors, EPA has made clear that it is *not* appropriate to reject a cost-effective control measures based on purportedly

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<sup>2</sup> A deciview is a measurement of visibility impairment. A deciview is a haze index derived from calculated light extinction, such that uniform changes in haziness correspond to uniform incremental changes in perception across the entire range of conditions, from pristine to highly impaired. 40 C.F.R. § 51.301

insufficient visibility benefits. In determining whether each state’s haze plan satisfies the statutory mandate to make reasonable progress, EPA reviews whether the state follows the requirements to consult with other states and reasonably considers the four statutory factors for reasonable progress. 40 C.F.R. § 51.308(d)(1)(iii).

## **B. EPA’s 2017 Revisions to the Regional Haze Rule**

On January 10, 2017, the EPA revised the Regional Haze Rule to strengthen and clarify the reasonable progress and consultation requirements of the rule. *See generally* 82 Fed. Reg. 3078. In particular, the rule revisions make clear that states are to *first* conduct the required four-factor analysis for its sources, considering the four statutory factors, and *then* use the results from its four-factor analyses and determinations to develop the reasonable progress goals.<sup>3</sup> Thus, the rule “codif[ies]” EPA’s “long-standing interpretation” of the SIP “planning sequence” States are required to follow: **(1)** [C]alculate baseline, current and natural visibility conditions, progress to date and the [Uniform Rate of Progress] URP; **(2)** [D]evelop a long-term strategy for addressing regional haze by evaluating the four factors to determine what emission limits and other measures are necessary to make reasonable progress; **(3)** [C]onduct regional-scale modeling of projected future emissions under the long-term strategies to establish RPGs and then compare those goals to the URP line; and **(4)** [A]dopt a monitoring strategy and other measures to track future progress and ensure compliance.<sup>4</sup>

Thus, the Regional Haze Rule makes clear that:

The CAA requires states to determine what emission limitations, compliance schedules and other measures are necessary to make reasonable progress by considering the four factors. The CAA does not provide that states may then reject some control measures already determined to be reasonable if, in the aggregate, the controls are projected to result in too much or too little progress. Rather, the rate of progress that will be achieved by the emission reductions resulting from all reasonable control measures is, by definition, a reasonable rate of progress. ... [I]f a state has reasonably selected a set of sources for analysis and has reasonably considered the four factors in determining what additional control measures are necessary to make reasonable progress, then the state’s analytical obligations are complete if the resulting RPG for the most impaired days is below the URP line. *The URP is not a safe harbor*, however, and states may not subsequently reject control measures that they have already

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<sup>3</sup> 82 Fed. Reg. 3078, 3090-91 (Jan. 10, 2017).

<sup>4</sup> *Id.* at 3091.

determined are reasonable.<sup>5</sup>

Moreover, for each Class I area within its borders, a state must determine the uniform rate of progress (“URP”), which is the amount of progress that, if kept constant each year, would ensure that natural visibility conditions are achieved in 2064. 40 C.F.R. § 51.308(d)(1)(i)(B). If a state establishes reasonable progress goals that provide for a slower rate of improvement in visibility than the uniform rate of progress, the state must provide a technically “robust” demonstration, based on a careful consideration of the statutory reasonable progress factors, that “there are no additional emission reduction measures for anthropogenic sources or groups of sources” that are reasonably be anticipated to contribute to visibility impairment in affected Class I areas.<sup>6</sup>

Although many states addressed the Clean Air Act’s BART requirements in their initial regional haze plans, EPA’s 2017 revisions to the Regional Haze Rule make clear that BART was not a once-and-done requirement. Indeed, states “will need” to reassess “BART-eligible sources that installed only moderately effective controls (or no controls at all)” for any additional technically-achievable controls in the second planning period.<sup>7</sup>

To the extent that a state declines to evaluate additional pollution controls for any source based on that source’s planned retirement or decline in utilization, it must incorporate those operating parameters or assumptions as enforceable limitations in the second planning period SIP.<sup>8</sup> The Clean Air Act requires that “[e]ach state implementation plan . . . *shall*” include “enforceable limitations and other control measures” as necessary to “meet the applicable requirements” of the Act. 42 U.S.C. § 7410(a)(2)(A). The Regional Haze Rule similarly requires each state to include “enforceable emission limitations” as necessary to ensure reasonable progress toward the national visibility goal.<sup>9</sup> Moreover, where a source plans to permanently cease operations or projects that future operating parameters (*e.g.*, limited hours of operation or capacity utilization) will differ from past practice, and if this projection has a deciding whether additional pollution controls are necessary to ensure reasonable progress, then the state “must” make those parameters or assumptions into enforceable limitations.<sup>10</sup>

Finally, the state’s SIP revisions must meet certain procedural and

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<sup>5</sup> *Id.* at 3093 (emphasis added).

<sup>6</sup> *Id.* § 51.308 (f)(2)(ii)(A).

<sup>7</sup> 82 Fed. Reg. at 3,083; *see also id.* at 3,096 (“states must evaluate and reassess all elements required by 40 CFR 51.308(d)”).

<sup>8</sup> 40 C.F.R. pt.51, App’x. Y § IV(D)(4)(d)(2) (if a).

<sup>9</sup> *See generally* 40 C.F.R. § 51.308(d)(3).

<sup>10</sup> *See* 40 C.F.R. pt. 51, App. Y § (IV)D.4.d.2

consultation requirements.<sup>11</sup> The state must consult with the Federal Land Managers (“FLMs”) and look to the FLMs’ expertise of the lands and knowledge of the way pollution harms them to guide the state to ensure SIPs do what they must to help restore natural skies.<sup>12</sup> The rule also requires that in “developing any implementation plan (or plan revision) or progress report, the State must include a description of how it addressed any comments provided by the Federal Land Managers.”<sup>13</sup>

### C. EPA’s July 8, 2021 Regional Haze Memorandum

On July 8, 2021, EPA issued additional guidance to states clarifying certain aspects of the revised Regional Haze Rule and providing further information to states and EPA regional offices regarding their planning obligations for the Second Planning Period.<sup>14</sup> Because EPA’s July 2021 Memo is directly relevant to—and in some cases, confirms—several of the flaws in LDEQ’s proposed SIP, as explained below and in the attached technical reports, we urge LDEQ to reevaluate its proposed SIP in light of EPA’s July 2021 Memo.

The Conservation Organizations are still reviewing and evaluating EPA’s July 2021 Memo, but the memorandum makes clear that certain aspects of LDEQ’s proposed Regional Haze SIP are fundamentally flawed and cannot be approved. Particularly relevant here, EPA made clear that States must secure additional emission reductions that build on progress already achieved, there is an expectation that reductions are additive to ongoing and upcoming reductions under other CAA programs.<sup>15</sup> In evaluating sources for emission reductions, EPA emphasized that:

Source selection is a critical step in states’ analytical processes. All subsequent determinations of what constitutes reasonable progress flow from states’ initial decisions regarding the universe of pollutants and sources they will consider for the second planning period. States cannot reasonably determine that they are making reasonable progress if they have not adequately considered the contributors to visibility impairment. Thus, while states have discretion to reasonably select sources, this analysis should be designed and conducted to ensure that source selection results in a set of pollutants and sources

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<sup>11</sup> For example, in addition to the RHR requirements, states must also follow the SIP processing requirements in 40 C.F.R. §§ 51.104, 51.102.

<sup>12</sup> 40 C.F.R. § 51.308(i).

<sup>13</sup> *Id.* § 51.308(i)(3).

<sup>14</sup> July 8, 2021 Memo from Peter Tsirogotis to Regional Air Directors, Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period at 3 (“July 2021 Memo”), <https://www.epa.gov/visibility/clarifications-regarding-regional-haze-state-implementation-plans-second-implementation>.

<sup>15</sup> *Id.* at 2.

the evaluation of which has the potential to meaningfully reduce their contributions to visibility impairment.<sup>16</sup>

Thus, it is generally not reasonable to exclude from further evaluation larger sources of visibility-impairing pollution. Moreover, a state's obligation to consider the statutory reasonable progress factors for a particular source is not discharged simply because another source or another state has greater contributions to visibility impairment.<sup>17</sup>

For sources that have previously installed controls, states should still evaluate the "full range of potentially reasonable options for reducing emissions," including options that may "achieve greater control efficiencies, and, therefore, lower emission rates, using their existing measures."<sup>18</sup> Moreover, "[i]f a state determines that an in-place emission control at a source is a measure that is necessary to make reasonable progress and there is not already an enforceable emission limit corresponding to that control in the SIP, the state is required to adopt emission limits based on those controls as part of its long-term strategy in the SIP via the regional haze second planning period plan submission."<sup>19</sup> This means that so-called "on-the-way" measures, including anticipated shutdowns or reductions in a source's emissions or utilization, that are relied upon to forgo a four-factor analysis or to shorten the remaining useful life of a source "must be included in the SIP."<sup>20</sup> In addition, the Memo makes clear that a state should generally not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period owing to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas. Finally, the Memo confirms EPA's recommendation that states take into consideration environmental justice concerns and impacts in issuing any SIP revision for the second planning period.

In sum, EPA's July 2021 Memo unequivocally states that meaningful reductions are expected to make reasonable progress towards the national goal of restoring visibility – reductions in SO<sub>2</sub> and NO<sub>x</sub>, reductions in the biggest sources of impairment as well as relatively smaller contributors, reductions that are achievable looking across a full spectrum of options of emission reducing measures. That the Brame facility is absent from analysis and reduction requirements is notable, for example, and on its face at odds with the state's haze obligations. EPA's memo is responsive to observations of state process and should result in redirect Louisiana towards compliance with the CAA. State efforts to avoid reductions- to assert that because visibility has improved, because reductions are anticipated

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<sup>16</sup> *Id.* at 3.

<sup>17</sup> *Id.*

<sup>18</sup> *Id.* at 7.

<sup>19</sup> *Id.* at 8.

<sup>20</sup> *Id.* at 8-9.

reductions at some later date or due to implementation of another program, or because a source has some level of control are not acceptable excuses and neither is ignoring requests of FLMs and other states to assess sources for reductions. Actual requirements for emission reductions are expected for a haze SIP to be approvable in the absence of rare circumstances and this recent regional haze memo makes this plain.

## II. LDEQ'S PROPOSED SIP FAILS TO MEET THE BASIC REQUIREMENTS OF THE REGIONAL HAZE RULE.

In its proposed SIP, LDEQ indicates that it sent information collection requests to each source that the state identified as having a visibility “impact on the Louisiana’s Class I area” (Breton National Wilderness Area),<sup>21</sup> and asked each identified facility to provide data to evaluate the facilities for emission controls. LDEQ then “reviewed the four-factor analysis information submitted by each facility,”<sup>22</sup> but for each facility, the agency “deferr[ed]” without analysis or explanation any emission control or reduction determination “until a later implementation period.”<sup>23</sup> Elsewhere in the proposed SIP, LDEQ provides a five-sentence explanation for its decision not to require additional emission reductions from the largest sources of visibility impairment in the state:

When determining controls needed to meet reasonable progress goals for the second planning period, LDEQ considered reductions that were reported to have recently occurred and those that will occur in the second planning period. As a result of active consent decrees requiring reductions, and *planned facility closures*, emissions impacting Breton will be reduced by at least 17622.22 tons of SO<sub>2</sub>/year and at least 915.543 tons NO<sub>x</sub>/year during the second planning period. The closure of Dolet Hills will reduce emissions impacting Caney Creek and Upper Buffalo by 9957 tons/year of SO<sub>2</sub> and 1988 tons/year of NO<sub>x</sub>. LDEQ has determined that *these reductions, coupled with current progress on the glide path, are sufficient to achieve reasonable progress in the second planning period*. Additional reductions from other consent decrees, that have *yet to be quantified, are also anticipated in the second planning period*.<sup>24</sup>

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<sup>21</sup> Louisiana Department of Environmental Quality’s (“LDEQ”) Proposed State Implementation Plan (“SIP”) for Regional Haze Program for the Second Implementation Period at 12., LDEQ AI# 174156, LDEQ 2104Pot1, Doc. ID No. 12656414 (Apr. 20, 2021) (Proposed SIP”).

<sup>22</sup> *Id.* at 14.

<sup>23</sup> See, e.g., *id.* at 17, 21-24 (deferring determinations for Canal, Nelson Industrial Steam, Ninemile, R.S. Nelson, Big Cajun II).

<sup>24</sup> *Id.* at 34.



That perfunctory explanation is unsupported by the record, arbitrary and capricious, and inconsistent with the Clean Air Act and the Regional Haze Rule, for numerous reasons.

**A. LDEQ Failed to Conduct Any Independent Emission Control Analyses for Any Sources.**

The most significant omission in the proposed SIP is LDEQ's failure to independently evaluate and analyze emission reduction measures for any source that may necessary to make reasonable progress based on a four-factor analysis. The RHR requires, in part, that a state's long-term strategy meet the following requirements:

*The State* must evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected anthropogenic source of visibility impairment. The State should consider evaluating major and minor stationary sources or groups of sources, mobile sources, and area sources. *The State* must include in its implementation plan a description of the criteria it used to determine which sources or groups of sources it evaluated and how the four factors were taken into consideration in selecting the measures for inclusion in its long-term strategy. In considering the time necessary for compliance, if the State concludes that a control measure cannot reasonably be installed and become operational until after the end of the implementation period, the State may not consider this fact in determining whether the measure is necessary to make reasonable progress.

40 C.F.R. §51.308(f)(2)(i).

Although LDEQ developed a list of sources for which the agency requested information relating to a four-factor analysis, it is clear that the agency did not, in fact, independently evaluate and analyze emission reduction measures for any source. As the Regional Haze Rule makes clear, the *state* has a duty to conduct a "robust" analysis of potential reasonable progress controls, and must "document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects."<sup>25</sup>

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<sup>25</sup> 40 C.F.R. § 51.308(f)(2)(iii).

LDEQ’s proposed SIP fails to satisfy the Clean Air Act and the Regional Haze Rule’s analytical requirements, in several ways. First, as discussed more fully below and in the attached technical reports of Vicki Stamper and Howard Gebhart, the utilities’ modeling and cost-effectiveness analyses that LDEQ included in the SIP appendices contain several significant errors and questionable assumptions, and appear to be designed to reach the respective utilities’ preferred results—a determination that any additional controls are unnecessary. It does not appear, however, as though LDEQ made any attempt to independently review, evaluate, or verify those analyses. In fact, based on a review of LDEQ’s database, it does not appear that LDEQ has any of the underlying air quality modeling in its possession, and therefore cannot have independently evaluated those analyses. The agency’s record is similarly devoid of any independent review conducted by LDEQ of the respective utility’s emission control cost analyses. This lack of basic documentation not only precludes LDEQ or any independent reviewer from verifying the respective utility modeling or control cost analyses, but it is contrary to the Clean Air Act and the Regional Haze Rule itself.<sup>26</sup> LDEQ has a legal obligation to submit a SIP that complies with the Clean Air Act—which includes, among other things, requiring enforceable emission limitations necessary to ensure reasonable progress<sup>27</sup>—regardless of what a utility advocates for in its own, inherently biased control analysis. And as explained below, several aspects of the control analyses for R.S. Nelson, Big Cajun II, Rodemacher 2, and Madison 3 do not comply with applicable Clean Air Act requirements.

Second, LDEQ attempts to justify “deferring any further” emission reductions for every major source in the state by pointing out that Louisiana’s Breton Wilderness Class I area appears to be trending below these area’s glide path or URP, which LDEQ suggests is “sufficient to achieve reasonable progress.”<sup>28</sup> EPA has made clear, however, that meeting or exceeding the URP does *not* obviate the need for states to conduct a robust analysis and making a technical demonstration that additional controls or emission reductions are not reasonable. “[A]n evaluation of the four statutory factors is required . . . regardless of the Class I area’s position on the glidepath . . . the URP does not establish a ‘safe harbor’ for the state in setting its progress goals.”<sup>29</sup> Rather, states must “determine what emission

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<sup>26</sup> *See id.*

<sup>27</sup> 42 U.S.C. §§ 7410(a)(2)(A); 7491(b)(2).

<sup>28</sup> Proposed SIP at 34, 40

<sup>29</sup> 81 Fed. Reg. 66,331, 66,631 (Sept. 27, 2016); *see also* 81 Fed. Reg. 296, 326 (Jan. 5, 2016) (determining, as part of the reasonable progress federal implementation plan for Texas, “the uniform rate of progress is not a ‘safe harbor’ under the Regional Haze Rule.”); EPA, Responses to Comments at 120, Promulgation of Air Quality Implementation Plans; State of Texas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan: Best Available Retrofit Technology and Interstate Transport Provisions, EPA Docket No. EPA-R06-OAR-2016-6011 (June 2020) (“EPA has repeatedly and consistently taken the position that meeting a specific reasonable progress goal is not, itself, a “safe harbor,” and

limitations, compliance schedules and other measures are necessary to make reasonable progress by considering the four factors” and must not reject “control measures determined to be reasonable” based on the degree of progress.<sup>30</sup> Indeed, in its July 8, 2021 Memo, EPA reiterated that the uniform rate of progress is “not a safe harbor,” and that it is not appropriate to reject cost-effective emission reductions on the basis that visibility in a particular Class I area is on the glide path. Instead, states are required to “evaluate and determine emission reduction measures that are necessary to make reasonable progress *by considering the four statutory factors.*”<sup>31</sup> Here, LDEQ’s decision to defer reasonable and cost-effective controls to another planning period, simply because Breton is on the glidepath, is contrary to the Clean Air Act and the Regional Haze Rule.

Third, LDEQ’s “glide path” rationale is misplaced because the agency failed to evaluate the Clean Air Act’s reasonable progress factors in determining whether emission reductions are may be necessary to ensure reasonable progress towards natural visibility in each Class I area that Louisiana sources affect, as required by the Regional Haze Rule.<sup>32</sup> Indeed, the Regional Haze Rule explicitly requires Louisiana to make meaningful reductions to ensure reasonable progress towards the national goal of restoring visibility. In so doing, Louisiana must provide a “robust demonstration,” including documenting the criteria used to determine which sources or groups or sources were evaluated and how the four factors were taken into consideration. Given Louisiana’s sources’ impacts to Caney Creek in Arkansas, LDEQ must provide the “robust demonstration,” based on a consideration of the four statutory reasonable progress factors, that no further emission reductions are cost effective and reasonable for the power plants that affect visibility in Class I areas outside the state. As discussed further below, the Stamper Report considers each of the power plants with the greatest impacts at Breton Island and Caney Creek, and concludes that there are cost-effective control measures available, or at a minimum, that those facilities should have their emissions limits tightened to ensure current levels do not rise.

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does not relieve the state of the obligation to consider additional measures for reasonable progress. If it is reasonable to make more progress than the URP, a state must do so, as EPA explained in the 1999 regional haze rule) (citing 64 Fed. Reg. at 35732); *see also* 81 Fed. Reg. at 66,370 (“EPA’s longstanding interpretation of the regional haze rule is that ‘the URP does not establish a ‘safe harbor’ for the state in setting its progress goals.’”) (quoting 79 Fed. Reg. 74818, 74834)).

<sup>30</sup> 82 Fed. Reg. at 3093; *see also* 81 Fed. Reg. at 66,631.

<sup>31</sup> July 2021 Memo at 15-16 (emphasis added).

<sup>32</sup> *See* 40 C.F.R. § 51.308(f)(2) (“Each State must submit a long-term strategy that addresses regional haze visibility impairment for each mandatory Class I Federal area within the State *and for each mandatory Class I Federal area located outside the State that may be affected by emissions from the State.*”) (emphasis added); *id.* § 51.308(f) (3)(ii)(A)-(B).

Finally, LDEQ's improper reliance on the URP to defer any control determinations is compounded by its erroneous adoption of the projected deciview improvement for Breton Island, included in EPA's 2028 modeling update, as the state's reasonable progress goal.<sup>33</sup> "Reasonable progress goals," however, are a function of the reasonable progress achievable through the adoption of emission controls and reductions, based on a consideration of the four statutory factors: (1) the costs of compliance, (2) the time necessary for compliance, (3) the energy and non-air quality environmental impacts of compliance, and (4) the remaining useful life of any potentially affected sources.<sup>34</sup> As EPA's July 8, 2021 Memo makes clear, reasonable progress goals "are ***the modeled result of the measures in states' long-term strategies***, as well as other measures required under the CAA (that have compliance dates on or before the end of 2028). RPGs ***cannot be determined before states have conducted their four-factor analyses*** and determined the control measures that are necessary to make reasonable progress."<sup>35</sup> Here, LDEQ failed to conduct any analysis or require any emission reductions as part of its SIP, and therefore its selection of EPA's projected deciview improvements from *other* Clean Air Act measures not included in the state's SIP, is arbitrary and capricious and contrary to the Regional Haze Rule.

#### **B. LDEQ Erroneously Relied on Unenforceable and Unverifiable Emission Reductions.**

Along with its unlawful reliance on the URP to excuse any further emission reductions, LDEQ repeatedly points to "anticipated" emission reductions or source retirements to avoid a meaningful analysis of potential cost-effective controls for the state's largest sources.<sup>36</sup> This blanket reliance on remaining useful life to excuse further analysis is flawed in at least four ways. First, to the extent that LDEQ declines to evaluate additional pollution controls for any source based on that source's planned retirement or decline in utilization, Louisiana must incorporate those operating parameters or assumptions as enforceable limitations in the second planning period SIP.<sup>37</sup> The Clean Air Act requires that "[e]ach state implementation plan . . . shall" include "enforceable limitations and other control measures" as necessary to "meet the applicable requirements" of the Act. 42 U.S.C. § 7410(a)(2)(A). The Regional Haze Rule similarly requires each state to include "enforceable emission limitations" as necessary to ensure reasonable progress toward the national visibility goal.<sup>38</sup> Moreover, where a source plans to permanently cease operations or projects that future operating parameters (*e.g.*, limited hours of operation or capacity utilization) will differ from past practice, and if this projection

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<sup>33</sup> Proposed SIP at 37-38.

<sup>34</sup> 42 U.S.C. § 7491(g)(1); 40 C.F.R. § 51.308(d)(1)(i)(A), (d)(3).

<sup>35</sup> July 2021 Memo at 6.

<sup>36</sup> *See, e.g.*, Proposed SIP at 34.

<sup>37</sup> 40 C.F.R. pt.51, App'x. Y § IV(D)(4)(d)(2) (if a).

<sup>38</sup> *See generally* 40 C.F.R. § 51.308(d)(3).

is relied upon to determine whether additional pollution controls are necessary to ensure reasonable progress, then the state “must” make those parameters or assumptions into enforceable limitations.<sup>39</sup> Underscoring this requirement of enforceability, RPGs adopted by a state with a Class I area must be based only on emission controls measures that have been adopted and are enforceable.<sup>40</sup> Thus, to the extent that LDEQ declines to conduct the required four-factor analysis for retiring sources, the state must, at a minimum, make those retirement decisions federally enforceable with compliance deadlines for retirement by the end of the second planning period, 2028, and through the second planning period SIP.<sup>41</sup>

Second, even where a facility has an enforceable closure date, LDEQ is obligated to consider whether there are cost-effective control measures that could be implemented in the meantime.<sup>42</sup> Once again, EPA’s July 2021 Memo is instructive. There, the agency made clear that in evaluating reasonable progress for all sources, states should consider the “full range of potentially reasonable options for reducing emissions . . . may be able to achieve greater control efficiencies, and, therefore, lower emission rates, using their existing measures.”<sup>43</sup> As discussed below, there are some types of control measures that are likely to be cost-effective even within shorter time-frames.

Third, as EPA’s July 8, 2021 Memo again makes clear, a state’s reasonable progress goals **are a function of the** emission reduction *measures “in states’ long-term strategies*, as well as other measures required under the CAA (that

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<sup>39</sup> See 40 C.F.R. pt. 51, App. Y § (IV)D.4.d.2

<sup>40</sup> 40 C.F.R. § 51.308(f)(3).

<sup>41</sup> We note that Cleco indicates that is planning to retire Big Cajun II Units 2 and 3 no later than December 31, 2032 and is prepared to accept a federally enforceable limits to that effect, Proposed SIP at pdf p. 74, yet LDEQ inexplicably defers adopting any limits for the plant.

<sup>42</sup> See, e.g., 40 C.F.R. § 51.308(f)(2)(i) (The State must evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected anthropogenic source of visibility impairment.”); see also 82 Fed. Reg. at 3088 (“Consistent with CAA section 169A(g)(1) and our action on the Texas SIP, a state’s reasonable progress analysis must consider a meaningful set of sources and controls that impact visibility. If a state’s analysis fails to do so, for example, by . . . failing to include cost-effective controls at sources with significant visibility impacts, then the EPA has the authority to disapprove the state’s unreasoned analysis and promulgate a FIP.”).

Even if a source has a limited remaining useful life, EPA’s Guidance contemplates that states consider cost-effective operational upgrades. Regional Haze Rule Guidance § II.B.3(f) (“If a control measure involves only operational changes, there typically will be only small capital costs, if any, and the useful life of the source or control equipment will not materially affect the annualized cost of the measure.”).

<sup>43</sup> July 2021 Memo at 7.

have compliance dates *on or before the end of 2028*.”<sup>44</sup> In its proposed SIP, LDEQ improperly relies on emission reductions that will *not* take place during the planning period, and for which the agency admits that it has not quantified the benefits.<sup>45</sup>

### **C. LDEQ Improperly Defers Making any Four-Factor Determinations Based on Purported Emission Reductions from Existing Clean Air Act Programs.**

In addition to its reliance on “anticipated” and unenforceable emission reductions,<sup>46</sup> LDEQ relies heavily on “the continued implementation of various air quality rules and programs” to ensure reasonable progress.<sup>47</sup> LDEQ’s reliance on existing air quality programs is misplaced. First, as discussed below and in the attached technical report of Vicki Stamper, there are cost-effective pollution control measures that are readily achievable for several of Louisiana’s EGUs. In fact, several of those EGUs are capable of achieving on a continuous basis better emission rates than they are currently displaying. Second, reasonable progress requires that states consider the four statutory factors and adopt and include in their SIPs enforceable emission limitations to achieve reasonable progress toward the elimination of all anthropogenic pollution in Class I areas. This means that states must secure meaningful emission reductions that build on progress already achieved, there is an expectation that reductions are additive to ongoing and upcoming reductions under other CAA programs. Indeed, as EPA’s July 2021 Memo makes clear,

a state should generally not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period owing to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas. More broadly, we do not think a state should rely on these two additional factors to summarily assert that the state has already made sufficient progress and, therefore, no sources need to be selected or no new controls are needed regardless of the outcome of four-factor analyses.<sup>48</sup>

### **D. Individual Sources Meriting Further Review**

Although Louisiana correctly notes that the Dolet Hills lignite power plant is slated to close in the near future, other fossil-fuel burning power plants have nearly

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<sup>44</sup> *Id.* at 6 (emphasis added).

<sup>45</sup> Proposed SIP at 34.

<sup>46</sup> *Id.*

<sup>47</sup> *Id.* at 38.

<sup>48</sup> July 2021 Memo at 13.

a decade or more in their remaining useful life and remain some of the states' largest emitters of haze-forming pollutants. As an initial matter, LDEQ cannot use the near-term closure of the Dolet Hills plant to excuse its analysis of whether reasonable progress could be made through cost-effective controls on others. As EPA's Memo states:

a state should generally not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period owing to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas. More broadly, we do not think a state should rely on these two additional factors to summarily assert that the state has already made sufficient progress and, therefore, no sources need to be selected or no new controls are needed regardless of the outcome of four-factor analyses.<sup>49</sup>

Aside from LDEQ's improper reliance on emission reductions from Dolet Hills alone to justify deferring control determinations for all other sources, the utility technical analyses LDEQ included in the appendices of the proposed SIP are flawed in numerous ways, as explained in detail in the attached Stamper Report. Ultimately, LDEQ's reasonable progress analyses must be based on accurate information that is consistent with the Act and EPA's implementing regulations. As discussed in the attached report by Vicki Stamper, and fully incorporated by reference into these comments, the analyses underlying LDEQ's SIP rely on inflated cost effectiveness analysis by using incorrect information for interest rate, equipment life, control efficiency, and retrofit and other factors. As Ms. Stamper demonstrates, once those faulty assumptions are corrected, it is clear that there are cost-effective controls or emission reductions measures from several of the largest sources in the state that would ensure reasonable progress toward natural visibility in the Class I areas affected by Louisiana sources.

#### *1. R.S. Nelson*

The Roy S Nelson ("R.S. Nelson") Plant is a three-unit plant, with Units 3 and 4 primarily burning natural gas and Unit 6 primarily burning coal. Unit 6 is a 556 MW EGU that burns subbituminous Powder River Basin coal, and is equipped with separated overfire air and a low NO<sub>x</sub> concentric firing system for NO<sub>x</sub> control. R.S. Nelson Unit 6 is also equipped with an electrostatic precipitator for particulate matter control. Although Unit 6 has no SO<sub>2</sub> controls, LDEQ states that it is deferring a determination of regional haze controls on this unit until a later implementation period.<sup>50</sup> That determination was based, in part, on control analyses submitted by Entergy Louisiana, the owner of the plant. But as explained

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<sup>49</sup> *Id.*

<sup>50</sup> *Id.* at 23.

in detail in the attached Stamper Report, that analysis is flawed in multiple respects and consistently biased towards Entergy's preferred outcome—no additional controls. The Stamper Report further demonstrates that once the emission, cost inputs, and remaining useful life inputs are corrected, there are cost-effective SO<sub>2</sub> controls and NO<sub>x</sub> emission reductions that should be required as part of the second planning period.

As an initial matter, Entergy's July 2020 analysis for R.S. Nelson did not include a current four-factor analysis of controls, but instead relied on Entergy's 2016 BART analysis, which EPA previously found to be flawed in numerous ways. Entergy included costs in its 2016 BART analysis that are not typically allowed or provided for under the EPA's Control Cost Manual, such as owners' costs, escalation during construction, and a 25% contingency factor.<sup>51</sup> Entergy's control cost estimates also rely on an unreasonably high 7% interest rate, well above the low interest rates currently available. The April 2016 Entergy SO<sub>2</sub> control cost estimate also included escalation of materials and labor based on the typical schedule of installation of controls.<sup>52</sup> Such escalation is at odds with the overnight cost methodology of the EPA's Control Cost Manual. Further, as explained in detail in the attached Stamper Report, Entergy's assumed operating costs for FGD and DSI were consistently overestimated, and the reductions or emission rates achievable were underestimated. All of these assumptions in Entergy's April 2016 analyses will result in a significant overstatement of costs of controls.<sup>53</sup>

As the Stamper Report demonstrates, once Entergy's analysis is corrected to include appropriate annual costs using EPA-approved cost methodology, an appropriate emission or removal rates commonly achieved by similarly-situated EGUs, and annual emission reductions, it is clear that SO<sub>2</sub> emission reductions associated with wet or dry FGD systems or DSI would be cost-effective.<sup>54</sup>

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<sup>51</sup> EPA Technical Assistance Document at 16 (in Docket ID EPA-R06-OAR-2017-0129-0024 at Appendix F – LA\_RH\_Nelson\_TSD); EPA Technical Support Document at 18 (Docket ID EPA-R06-OAR-2017-0025).

<sup>52</sup> See July 2020 RS Nelson Four-Factor Submittal at attachment entitled Entergy, Nelson Unit 6, SO<sub>2</sub> BART Control Technology Summary, prepared by Sargent & Lundy, Dry FGD Cost Estimate Basis Document and Wet FGD Cost Estimate Basis (at pdf pages 367 and 422 of May 2021 Draft LA Regional Haze plan).

<sup>53</sup> See Stamper Report 18-20.

<sup>54</sup> See *id.* at 9-23.



**Table 1: Cost Effectiveness of SO<sub>2</sub> Controls at RS Nelson Unit 6 (2019 \$)<sup>55</sup>**

	Annual SO <sub>2</sub> Rate, lb/MMBtu	Capital Cost	O&M Costs	Total Annualized Costs	SO <sub>2</sub> Reduced, tpy	Cost Effectiveness, \$/ton
Wet FGD	0.03	\$286,960,813	\$9,474,076	\$24,693,492	7,873	\$3,137
NID™ CDS	0.04	\$262,032,828	\$9,160,678	\$23,046,926	7,734	\$2,980
SDA	0.05	\$262,032,828	\$9,160,678	\$23,046,926	7,596	\$3,034
DSI at 50% Control	0.42	\$18,855,266	\$10,607,463	\$11,600,791	4,143	\$3,187
DSI at 30% Control	0.30	\$16,039,256	\$7,880,344	\$8,725,320	2,486	\$2,729

As reflected in the table above, which is reproduced from Table 4 of the Stamper Report, DSI is the most cost-effective, but least effective at reducing emissions. Wet and dry FGD options would achieve 92-95% (or better) SO<sub>2</sub> control and are well within the range of costs that EPA has found to be reasonable.<sup>56</sup> would be very cost-effective. The costs of all of these controls are cost effective, and LDEQ must acknowledge them as such. And these costs are well below the cost effectiveness thresholds that other states or EPA have proposed or are currently planning to use for deciding cost effective controls to require in their regional haze plans for the second implementation period. For example, Texas is using \$5,000/ton as a cost effectiveness threshold.<sup>57</sup> Arizona is using \$4,000 to \$6,500/ton.<sup>58</sup> New

<sup>55</sup> See *id.*, Table 4.

<sup>56</sup> EPA has required SO<sub>2</sub> controls with an average cost-effectiveness of more than \$5,500 per ton. See 77 Fed. Reg. 31,691, 31,711 (May 29, 2012) and 77 Fed. Reg. 61,478, 61,506 (Oct. 9, 2012) (requiring controls with an average cost-effectiveness of \$5,587, \$5,583, and \$5,583 for the Kanoolehua, Puna, and Shipman power plants). Other final BART determinations have been only slightly less expensive than the costs here. See, e.g., approval of Colorado's SIP, 77 Fed. Reg. 18,052, 18,082, 18,084, 18,087 (Mar. 26, 2012), and 77 Fed. Reg. 76,871 (Dec. 31, 2012) (requiring NO<sub>x</sub> BART controls with an average cost-effectiveness of \$4,887 for Craig Unit 3).

<sup>57</sup> See

[https://www.tceq.texas.gov/assets/public/implementation/air/sip/haze/2021RHSIP\\_pro.pdf](https://www.tceq.texas.gov/assets/public/implementation/air/sip/haze/2021RHSIP_pro.pdf).

<sup>58</sup> See, e.g., Arizona Department of Environmental Quality, 2021 Regional Haze Four-Factor Initial Control Determination, Tucson Electric Power Springerville Generating Station, at 15, available at <https://www.azdeq.gov/2021-regional-haze-sip-planning>.

Mexico is using a floor of \$7,000 per ton,<sup>59</sup> and Oregon is using \$10,000/ton or possibly even higher.<sup>60</sup> Washington is using \$6300/ton for Kraft pulp and paper power boilers.<sup>61</sup> For these reasons, LDEQ must reevaluate the availability and cost-effectiveness of SO<sub>2</sub> controls at R.S. Nelson.

Entergy's evaluation of NOx controls is similarly flawed. Unit 6 is a tangentially-fired boiler with a low NOx concentric firing system and separated overfire air. Unit 6's annual NOx rate averaged over 2018-2019 was 0.19 lb/MMBtu, but the unit's monthly average NOx rates varied widely over 2018 to 2019, from a maximum monthly NOx rate of 0.33 lb/MMBtu to a minimum monthly NOx rate of 0.12 lb/MMBtu.<sup>62</sup> As an initial matter, R.S. Nelson Unit 6's NOx rate is significantly worse than that of the top performing tangentially-fired boilers with similar combustion controls.<sup>63</sup> At a minimum, LDEQ should require Entergy to evaluate upgrade its existing controls, which would result in improved NOx removal efficiency.<sup>64</sup>

As the Stamper Report indicates, however, selective catalytic reduction ("SCR") and selective noncatalytic reduction ("SNCR") technology are both technically available and cost-effective options for R.S. Nelson. Again, correcting Entergy's control analysis to incorporate only appropriate annual costs and appropriate (achievable) NOx emission rates, there are cost-effective NOx controls which most assuredly can be applied at RS Nelson Unit 6 and can significantly reduce NOx emissions are provided below.

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<sup>59</sup> See NMED and City of Albuquerque, Regional Haze Stakeholder Outreach Webinar #2, at 12, available at [https://www.env.nm.gov/air-quality/wp-content/uploads/sites/2/2017/01/NMED\\_EHD-RH2\\_8\\_25\\_2020.pdf](https://www.env.nm.gov/air-quality/wp-content/uploads/sites/2/2017/01/NMED_EHD-RH2_8_25_2020.pdf).

<sup>60</sup> See, e.g., September 9, 2020 letter from Oregon Department of Environmental Quality to Collins Forest Products, at 1-2, available at <https://www.oregon.gov/deq/aq/Documents/18-0013CollinsDEQletter.pdf>.

<sup>61</sup> See, e.g., Washington Department of Ecology, Draft Responses to comments for chemical pulp and paper mills, at 5, 6, and 8, attached as Ex. 13 to Stamper Report.

<sup>62</sup> Stamper Report at 29.

<sup>63</sup> Stamper Report at 29, Table 8.

<sup>64</sup> See July 2021 Memo at 5 ("If a source can achieve, or is achieving, a lower emission rate using its existing measures than the rate assumed for the "effective control," a state should further analyze the lower emission rate(s) as a potential control option.").

**Table 2: Cost Effectiveness of Post-Combustion NOx Controls at RS Nelson Unit 6<sup>65</sup>**

Control	Annual NOx Rate, lb per MMBtu	Capital Cost (2019\$)	O&M Costs	Total Annualized Costs	NOx Reduced from 2017-2019 Baseline, tpy	Cost Effectiveness, \$/ton
SCR	0.04	\$188,909,545	\$2,269,098	\$12,238,594	2,067	\$5,922/ton
SNCR	0.15	\$12,247,428	\$1,635,787	\$2,286,738	550	\$4,156/ton

As shown above, SCR would reduce NOx emissions by 2,067 tons per year at cost effectiveness of \$5,922/ton. SNCR would achieve much lower NOx reductions of 550 tons per year but is more cost effective. As noted in the preceding discussion, however, these costs are within the range that other states are planning to use to determine cost effectiveness of controls in their regional haze plans for the second implementation period. LDEQ should do the same; at a minimum, the state must explain, based on a consideration of the four statutory factors, why such controls are not reasonable and cost effective.

In sum, as demonstrated by Ms. Stamper, there are very cost-effective SO<sub>2</sub> and NOx emission reductions available for R.S. Nelson Unit 6 that also satisfy the other reasonable progress factors (remaining useful life, non-air and energy impacts, and time to install controls). LDEQ must reconsider its proposed action to defer a determination of regional haze controls on this unit until a later implementation period.<sup>66</sup>

## 2. *Big Cajun II*

LDEQ's decision to defer any emission control determinations at the Big Cajun II power plant is similarly flawed. Big Cajun II includes two coal-fired boilers, Units 1 and 3, each with a generating capacity of 575 MW. Unit 1 has had a DSI system for SO<sub>2</sub> since 2015, but Unit 3 has no SO<sub>2</sub> controls. Trinity Consultants prepared a report on behalf of Cleco, the owner and operator of the facility. The July 2020 Cleco Four-Factor Submittal indicates that Cleco is required, per a consent decree, to either retire Unit 1 or convert the unit from coal to gas by April 1, 2025. Cleco's Four-Factor submittal also states that Cleco is planning to retire Units 2 and 3 no later than December 31, 2032 and is willing to take a federally enforceable limit on the operation of these units.<sup>67</sup> Yet, LDEQ inexplicably proposed to defer a determination on this source until a subsequent regional haze implementation

<sup>65</sup> See Stamper Report at 34, Table 9.

<sup>66</sup> Proposed SIP at 23.

<sup>67</sup> *Id.*, July 2020 Cleco Four-Factor Submittal at 1-1 (pdf page 67 of May 2021 Draft LA Regional Haze Plan).

period, and LDEQ is not even proposing to adopt an enforceable retirement requirement that Units 2 and 3 retire no later than December 1, 2032. As explained above, that is arbitrary and contrary to the Clean Air Act’s and Regional Haze Rule’s requirements that SIPs include enforceable emission limitations.<sup>68</sup>

As explained in the Stamper Report, absent an enforceable retirement commitment, Cleco and LDEQ should have evaluated potential SO<sub>2</sub> control cost based on the remaining life of the plant and the common life on any add-on controls. Without a binding retirement incorporated into the SIP, it was unreasonable for Cleco to assume only a four-year remaining useful life. Moreover, Cleco also arbitrarily assumed that it would take 6.5 years to install such controls, which is an unreasonably long period of time, given that FGD could be installed within 3-4 years and DSI could be installed in as few as 18 months.<sup>69</sup> Once the Cleco analysis is corrected to reflect appropriate costs and achievable emission rates, the cost of additional controls at Big Cajun II, Unit 3 is very cost effective.

**Table 3: Cost Effectiveness of SO<sub>2</sub> Controls at Big Cajun II (2019 \$)<sup>70</sup>**

	Annual SO <sub>2</sub> Rate, lb/MMBtu	Capital Cost (2019 \$)	O&M Costs (2019 \$)	Total Annualized Costs (2019 \$)	SO <sub>2</sub> Reduced, tpy	Cost Effectiveness, \$/ton (2019 \$)
Wet FGD	0.03	\$288,582,799	\$9,149,995	\$24,455,181	7,396	\$3,307
NID CDS	0.04	\$263,580,897	\$8,812,213	\$22,780,323	7,272	\$3,132
SDA	0.05	\$263,580,897	\$8,812,213	\$22,780,323	7,149	\$3,186
DSI at 50% Control	0.32	\$19,081,803	\$9,760,508	\$10,765,770	3,949	\$2,726

While DSI at 50% SO<sub>2</sub> control is the most cost-effective, it is the least effective at reducing SO<sub>2</sub> emissions from Big Cajun II Unit 3. All of the three FGD options evaluated (wet FGD, NID™ circulating dry scrubber, and SDA) would achieve 90-95% (or better) SO<sub>2</sub> control very cost-effectively. The costs of all of these controls are all cost effective. As noted, these costs are well below the cost effectiveness thresholds that other states have proposed or are currently using to decide whether controls are cost effective for the second implementation period.

<sup>68</sup> 42 U.S.C. § 7410(a)(2)(A).

<sup>69</sup> See Stamper Report at 38.

<sup>70</sup> Stamper Report at 43, Table 11.

### 3. Brame Energy Center

Brame Energy Center consists of three electrical generating units owned and/or operated by Cleco: Unit 1 (also known as Nesbit I) is a 440 MW natural gas-fired boiler, Unit 2 (also known as Rodemacher II) is a 523 MW wall-fired boiler that combustions Powder River Basin subbituminous coal, and Unit 3 (also known as Madison Unit 3) is a circulating fluidized bed boiler that burns petroleum coke and coal and has a generating capacity of approximately 641 MW. LDEQ did not request a four-factor submittal for any of the Brame Energy Center units for the second implementation period. This is presumably because Brame Energy Center did not exceed the criteria that LDEQ used to select sources for consideration for control.<sup>71</sup> LDEQ's exclusion of any analysis of Brame is a significant error, for several reasons explained below and in the attached Stamper and Gebhart Reports.

- a. LDEQ's proposed SIP unreasonably screened Brame Energy Center from the required four-factor analysis based on faulty assumptions regarding impacts to visibility.

As an initial matter, LDEQ's SIP improperly relies on visibility impacts to reject any four-factor control analysis for Rodemacher 2 and Madison 3, which is at odds with the plain language of the Clean Air Act. The Act distinctly identifies that the RP analysis is done based on four-factors: (1) the costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. Because visibility is not one of the four statutory factors, the State cannot rely on visibility impacts to exclude emission reducing measures from a source that otherwise satisfies the four statutory factors. Indeed, EPA's July 2021 Memo states that consideration of visibility is not an off-ramp for controls that otherwise meet the four factors.<sup>72</sup> Therefore, where LDEQ's analysis considers information outside the bounds of these factors (*e.g.*, air quality impacts, modeling results, and emission inventories) it is inconsistent with the Act's four-factor analysis.<sup>73</sup>

Aside from LDEQ's improper use of visibility as a fifth factor to screen out Brame from further evaluation, the agency's reliance on the Central States Air Resources Agencies ("CENSARA") modeling overlooks several relevant factors and

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<sup>71</sup> See LDEQ's Summary of Criteria for Source Selection and LDEQ's Source Selection Spreadsheet, both revised 4/16/2020 and available at <https://www.deq.louisiana.gov/index.cfm/page/261F2280-D9F2-E391-3F6CA81C44D4FD38>.

<sup>72</sup> July 2021 Memo at 12-13.

<sup>73</sup> The Regional Haze program takes air quality impacts into consideration in selecting which sources are evaluated for the four-factor analysis, and to apply that same metric twice is not consistent with how Congress designed the program.

is flawed in several respects, as explained in the attached Gebhart Report.<sup>74</sup> First, the Louisiana visibility modeling analysis relied upon an “area of influence” analysis by computing back-trajectories using the Hybrid-Single Particle Lagrangian Integrated Trajectory (“HYSPLIT”) model, which itself has significant uncertainties. Moreover, LDEQ selected a 2017 emission inventory year, but nevertheless computed HYSPLIT back-trajectories for the 20% most impaired visibility days using a 2012-16 timeframe, which creates a mismatch between the emissions inventory period and the IMPROVE monitoring period. Had LDEQ correctly matched emissions data and visibility impacts from the same modeling years, the outcome of the screening analysis likely would have been different.

Second, LDEQ has not demonstrated that the 2017 emissions were appropriately representative of Brame Energy Center’s normal operating conditions. Based on EPA data, emissions during 2018 and 2019 were typically higher than 2017.<sup>75</sup> If LDEQ modeled those higher emissions from 2018 and 2019, it is likely that Brame would not have been screened out from further analysis.

Third, LDEQ’s reliance on total 2017 emissions likely skewed the analysis. An evaluation of a source’s visibility impacts on the most-impaired and clearest days in any Class I area, as required under the Regional Haze rule, requires consideration of short-term emissions, e.g. daily emissions, and not annual average emissions. For EGUs, which are known to be a major contributor to visibility precursor emissions, the emissions on a daily basis vary considerably. As such, actual emissions at an individual emission source such as an EGU could in fact have been significantly higher on the 20% most impaired days compared to the annual average emissions. In fact, it might be reasonably expected that actual emissions at EGUs and other contributing emission sources could be higher than average on the 20% most-impaired days, i.e., it was the higher-than-average emissions at one or more sources which most likely caused a particular day to fall in the 20% most-impaired category. This outcome was not captured using the LDEQ visibility modeling approach.<sup>76</sup>

Fourth, LDEQ established thresholds that improperly evaluated the visibility impact of an individual source *relative to other emission sources* in the modeling domain. EPA’s July 2021 Memo makes clear that a state’s obligation to evaluate reasonable progress controls “is not discharged” simply because other source’s or state’s contributions to visibility impairment may be greater.<sup>77</sup> The thresholds as

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<sup>74</sup> Gebhart Report at 2-4; *See Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.* (“*State Farm*”), 463 U.S. 29, 43 (1983) (quoting *SEC v. Chenery*, 332 U.S. 194, 196 (1947)) (agency action is arbitrary and unlawful where, as here, the agency decision fails to consider the “relevant factors” or “an important aspect of the problem.”).

<sup>75</sup> Gebhart Report at 3.

<sup>76</sup> *Id.* at 4.

<sup>77</sup> July 2021 Memo at 3.

selected by LDEQ did not consider whether an individual source itself contributed to adverse visibility impacts.

Finally, LDEQ arbitrarily and inappropriately selected cumulative visibility thresholds that likely screened out significant sources of visibility pollution, and are inconsistent with thresholds that EPA has used in similar circumstances. Specifically, LDEQ eliminated from further consideration any source that contributed less than 1% based on the overall light extinction. LDEQ fails to provide any rationale or explanation for that threshold, and it is inconsistent with the thresholds that EPA has used in evaluating reasonable progress. In its final federal implementation plan for Texas, for example, EPA ultimately selected a 0.3% extinction threshold for sources as the amount that would warrant further evaluation of visibility benefits due to controls on those sources.<sup>78</sup> The 1% individual source contribution threshold selected by LDEQ was especially problematic given that visibility impairment occurs due to the cumulative effects from a large number of sources, and each can have a relatively small individual source contribution. To the extent LDEQ uses any threshold at all the they should have been set to be more inclusive with the goal of capturing all or most of the contributing emission sources. Specifically, the individual source contribution threshold could have been set at 0.5% and not 1%.<sup>79</sup>

b. There are cost-effective controls for Brame Energy Center, Unit 2.

At the outset, it is important to note that Brame is a significant source of visibility-impairing emissions. On a plantwide basis, the facility averaged 5,891 tons per year of SO<sub>2</sub> and 4,049 tons per year of NO<sub>x</sub>, according to data reported to EPA's Air Markets Program Database. As EPA's July 2021 Memo makes clear, to improve current visibility conditions and meet the national goal to eliminate anthropogenic visibility impairment before 2064, LDEQ should have evaluated all contributing sources regardless of the level of contribution for any individual emissions unit. LDEQ should have adopted thresholds that capture *all* sources which adversely impair visibility rather than identifying just the largest contributing sources.<sup>80</sup> Given the magnitude of Brame's emissions, the state should have selected Brame for further evaluation.

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<sup>78</sup> EPA, Technical Support Document for the Oklahoma and Texas Regional Haze Federal Implementation Plans (FIP TSD) at A-49.

<sup>79</sup> See generally Gebhart Report at 5-7.

<sup>80</sup> See also July 2021 Memo at 3 ("source selection is a critical step in states' analytical processes. All subsequent determinations of what constitutes reasonable progress flow from states' initial decisions regarding the universe of pollutants and sources they will consider for the second planning period. States cannot reasonably determine that they are making reasonable progress if they have not adequately considered the contributors to visibility impairment. Thus, while states have discretion to reasonably select sources, this analysis should be designed and conducted to ensure that source selection results in a set of

Although LDEQ did not require a four-factor evaluation of controls for the Brame Energy Center units, Sierra Club retained a technical expert, Vicki Stamper, to evaluate the availability and cost-effectiveness of further emission reductions for both SO<sub>2</sub> and NO<sub>x</sub> at Brame Unit 2. As reflected in the attached report, based on an evaluation of the four statutory factors, SO<sub>2</sub> and NO<sub>x</sub> controls at Brame Energy Center Unit 2 are cost-effective and should have been included in LDEQ's SIP.

The following table summarize the cost effectiveness calculations for SO<sub>2</sub> controls at Brame Unit 2.

**Table 4: Cost Effectiveness of SO<sub>2</sub> Controls at Brame Unit 2 (2019\$)<sup>81</sup>**

Control	Annual SO <sub>2</sub> Rate, lb/MMBtu	Capital Cost (2019 \$)	O&M Costs (2019 \$)	Total Annualized Costs	SO <sub>2</sub> Reduced from 2018-2019 Baseline, tpy	Cost Effectiveness, \$/ton (2019 \$)
WFGD	0.03	\$269,033,241	\$8,906,990	\$23,178,396	3,480	\$6,661
CDS no BH	0.04	\$126,078,328	\$7,558,047	\$14,276,528	3,346	\$4,267
SDA no BH	0.05	\$126,078,328	\$7,544,624	\$14,263,105	3,211	\$4,442

The costs of all of these controls should be considered as cost effective by LDEQ. The costs for a CDS or an SDA (without a baghouse) are at or below the cost effectiveness thresholds that other states have proposed or are currently planning to use for deciding cost effective controls to require in their regional haze plans for the second implementation period. As previously discussed, these costs are within the range that EPA and other states have consistently found to be reasonable and cost effective. Moreover, both dry and wet FGD systems would achieve significant SO<sub>2</sub> reductions from Brame Unit 2 and provide reasonable progress toward the national visibility goal. LDEQ must consider these controls at Brame Unit 2 as part of its regional haze plan for the second implementation period.

Ms. Stamper's analysis demonstrates that additional NO<sub>x</sub> emission reductions at Unit 2 are likewise cost effective. According to data in EPA's Air Markets Program Database, the SNCR system at Brame Unit 2 began operating August 30, 2013. Nevertheless, it is reasonable to consider a replacement of the

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pollutants and sources the evaluation of which has the potential to meaningfully reduce their contributions to visibility impairment.”).

<sup>81</sup> See Stamper Report at 46-58, Table 14.



SNCR with SCR at Brame Unit 2 to further reduce NOx in the second round of regional haze plans. SCR is much more effective at reducing NOx than SNCR, achieving 80-90% NOx removal compared to the 15-40% NOx removal achieved with SNCR. EPA has acknowledged that the installation of a new pollutant control required in the second round of regional haze plans may necessitate the removal or discontinuation of an existing pollution control.<sup>82</sup> As the Stamper Report demonstrates, replacement of the SNCR with SCR at Brame Unit 2 would greatly reduce NOx and therefore is an appropriate measure to evaluate to make reasonable progress towards the national visibility goal for the second implementation period and beyond.

**Table 5: Cost Effectiveness of Post-Combustion NOx Controls at Brame Unit 2<sup>83</sup>**

Control	Annual NOx Rate, lb per MMBtu	Capital Cost (2019\$)	O&M Costs	Total Annualized Costs	NOx Reduced from 2018-2019 Baseline, tpy	Cost Effectiveness, \$/ton
SCR	0.04	\$175,179,094	\$2,200,650	\$11,445,727	2,003	\$5,716/ton

As shown in the above table, SCR would reduce NOx emissions by 2,003 tons per year at cost effectiveness of \$5,716/ton. Once again, these SCR costs are within the range that other states are planning to use to determine cost effectiveness of controls in their regional haze plans for the second implementation period. Arizona is using \$4,000 to \$6,500/ton;<sup>84</sup> New Mexico is using \$7,000 per ton;<sup>85</sup> and Oregon is using \$10,000/ton or possibly even higher.<sup>86</sup>

#### 4. Ninemile Point

Ninemile Point Electrical Generating Plant is a power plant owned/operated by Entergy Louisiana, and consisting of three natural gas-fired EGUs (Units 3, 4,

<sup>82</sup> EPA's August 20, 2019 Guidance on Regional Haze State Implementation Plans for the Second Implementation Period at 31.

<sup>83</sup> Stamper Report at 58, Table 16.

<sup>84</sup> See, e.g., Arizona Department of Environmental Quality, 2021 Regional Haze Four-Factor Initial Control Determination, Tucson Electric Power Springerville Generating Station, at 15, available at <https://www.azdeq.gov/2021-regional-haze-sip-planning>.

<sup>85</sup> See NMED and City of Albuquerque, Regional Haze Stakeholder Outreach Webinar #2, at 12, available at [https://www.env.nm.gov/air-quality/wp-content/uploads/sites/2/2017/01/NMED\\_EHD-RH2\\_8\\_25\\_2020.pdf](https://www.env.nm.gov/air-quality/wp-content/uploads/sites/2/2017/01/NMED_EHD-RH2_8_25_2020.pdf).

<sup>86</sup> See, e.g., September 9, 2020 letter from Oregon Department of Environmental Quality to Collins Forest Products, at 1-2, available at <https://www.oregon.gov/deq/aq/Documents/18-0013CollinsDEQletter.pdf>.

and 5) and one natural gas-fired combined cycle EGU (Unit 6). Unit 3 is a 135 MW EGU; Unit 4 is 748 MW; Unit 5 is 763 MW; and Unit 6 is 640 MW. In response to LDEQ's request for information, Entergy provided a cost effectiveness analysis for NOx controls at the units 4 and 5 boilers, but did not provide a control cost analysis for Unit 6, given that the unit has SCR.

As detailed in the Stamper Report, the Entergy analysis was flawed in many respects, and included several assumptions that overestimate the costs of control. First, as with R.S. Nelson, Entergy used a 7% interest rate in amortizing capital costs, which is unreasonably high in light of prevailing rates. For SCR at Unit 4, Entergy assumed a reagent cost that was 8 times EPA's estimates for the same ammonia reagent; for Unit 5, Entergy assumed a cost that was nearly one third higher than EPA's default cost. Entergy applied the same approach and reagent cost values to its SNCR cost calculations but did not provide justification for the higher reagent costs compared to EPA's default cost values. By assuming either a very expensive ammonia solution or a urea solution, Entergy's cost analysis overstated operational costs of SCR and SNCR for NOx control at Ninemile Point Units 4 and 5.<sup>87</sup>

Moreover, for SCR, Entergy assumed a NOx emission rate of 0.05 lb/MMBtu would be achieved, which reflects only 77% NOx removal, when SCR systems are commonly capable of achieving 90% NOx removal rates or better. Finally, Entergy also provided a cost estimates for low NOx burners and overfire air at Ninemile Point Units 4 and 5, but did not provide any of the underlying cost data. Even with those omissions, Entergy's own cost effectiveness analyses showed that all of these NOx controls—SCR, SNCR, and low NOx and overfire air—would be cost-effective. It was therefore arbitrary for LDEQ to defer, out of hand, any controls for Ninemile during the planning period.

To fully evaluate the cost of controls at Ninemile, Vicki Stamper conducted an independent four-factor analysis of controls using EPA-approved methodologies and cost assumptions. The Stamper Report demonstrates that, after correcting Entergy's inflated cost assumptions, both SCR and SNCR would be even more cost effective.

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<sup>87</sup> Stamper Report at 61-62.

**Table 6: Cost Effectiveness of Post-Combustion NO<sub>x</sub> Controls at Ninemile Point<sup>88</sup>**

Control	Annual NO <sub>x</sub> Rate, lb per MMBtu	Capital Cost (2019\$)	O&M Costs	Total Annualized Costs	NO <sub>x</sub> Reduced from 2018-2019 Baseline, tpy	Cost Effectiveness, \$/ton
<b>Ninemile Point Unit 4</b>						
SCR	0.04	\$52,579,691	\$1,860,866	\$4,637,598	2,721	\$1,704/ton
SNCR	0.17	\$8,998,968	\$2,008,496	\$2,486,792	764	\$3,255/ton
<b>Ninemile Point Unit 5</b>						
SCR	0.04	\$53,634,097	\$1,666,643	\$4,499,006	2,063	\$2,181/ton
SNCR	0.17	\$9,116,760	\$1,557,324	\$2,041,880	578	\$3,532/ton

As the above table demonstrates, SCR is much more cost effective than SNCR, and would reduce NO<sub>x</sub> emissions by close to 4,800 tons per year from Ninemile Point Unit 4 and 5. Even Entergy’s cost effectiveness calculations of SCR, which took into account factors that would overstate the costs of SCR, show that SCR is cost effective at \$3,200 of NO<sub>x</sub> removed. Given that none of the other statutory factors indicates that SCR or SNCR technology are infeasible or unreasonable, LDEQ must reevaluate additional NO<sub>x</sub> controls for Ninemile Point.

*5. Non-point sources*

In addition to the fossil fuel burning power plants described above, LDEQ selected carbon black, petroleum coke calcining, petroleum refineries and other manufacturing facilities for review due to their impact on Breton Island and Caney Creek wilderness areas. According to the 2019 emissions reported in the Louisiana SIP, these sources emit more than 50,000 tons of SO<sub>2</sub> and more than 6,000 tons of NO<sub>x</sub> per year. Unfortunately, LDEQ inexplicably states that is deferring a determination of regional haze on the majority of these sources until a later implementation period.

The reasonable progress analyses submitted for these sources rely on inflated cost effectiveness analysis using incorrect information for interest rate, equipment life, control efficiency, and retrofit and other factors. LDEQ’s reasonable progress analyses must be based on accurate information that is consistent with the Act and EPA’s implementing regulations. Like the fossil fuel burning power plants reasonable progress analyses, it is expected that once the cost inputs and remaining useful life inputs are corrected, cost-effective SO<sub>2</sub> and NO<sub>x</sub> controls should be required by LDEQ to reduce emission from these facilities as part of the second planning period.

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<sup>88</sup> *Id.* at 65, Table 18.

Problematically, LDEQ is deferring a determination for reasonable progress to a later implementation period and is relying on several consent decrees for the majority of the non-EGUs. The consent decrees contain some SO<sub>2</sub> and NO<sub>x</sub> emissions limits and are in the SIP's appendix but they are not dated and signed and the limits reflected in these consent decrees are not enforceable in this state's SIP, an issue that should also be corrected. LDEQ's decision to excuse these significant sources of visibility impairing emission is arbitrary and capricious and at odds with the statute and implementing regulations.

### III. LDEQ'S CONSULTATION PROCESS WAS FUNDAMENTALLY INADEQUATE.

Congress required that EPA's regulations must require each applicable implementation plan for a State in which any mandatory Class I Federal area is located to contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal.<sup>89</sup> The Act further requires states to determine the measures necessary to make reasonable progress by considering the four factors,<sup>90</sup> while Congress set the national goal as preventing future and remedying existing anthropogenic visibility impairment in all Class I areas.<sup>91</sup> Thus, "Congress was clear that both downwind states (*i.e.*, "a State in which any [mandatory Class I Federal] area . . . is located) and upwind states (*i.e.*, "a State the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area") must revise their SIPs to include measures that will make reasonable progress at all affected Class I areas."<sup>92</sup>

"This consultation obligation is a key element of the regional haze program. Congress, the states, the courts and the EPA have long recognized that regional haze is a regional problem that requires regional solutions. *Vermont v. Thomas*, 850 F.2d 99, 101 (2d Cir. 1988)."<sup>93</sup> Congress intended this provision of the Clean Air Act to "equalize the positions of the States with respect to interstate pollution," (S. Rep. No. 95-127, at 41 (1977)) and EPA's interpretation of this requirement accomplishes this goal by ensuring that downwind states can seek recourse from EPA if an upwind state is not doing enough to address visibility transport.<sup>94</sup>

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<sup>89</sup> 42 U.S.C. § 7491(b)(2).

<sup>90</sup> *Id.* § 7491(g)(1).

<sup>91</sup> *Id.* § 7491(a)(1).

<sup>92</sup> 82 Fed. Reg. 3078, 3094 (Jan. 10, 2017).

<sup>93</sup> *Id.* at 3085.

<sup>94</sup> *Id.*

In developing a long-term strategy for regional haze, EPA's regulation 40 C.F.R. § 51.308(f)(2) requires that a state take three distinct steps: consultation; demonstration; and consideration. Specifically, the regulation requires:

- (ii) The State *must consult* with those States that have emissions that are reasonably anticipated to contribute to visibility impairment in the mandatory Class I Federal area to develop coordinated emission management strategies containing the emission reductions necessary to make reasonable progress.
  - (A) The State *must demonstrate* that it has included in its implementation plan all measures agreed to during state-to-state consultations or a regional planning process, or measures that will provide equivalent visibility improvement.
  - (B) The State *must consider* the emission reduction measures identified by other States for their sources as being necessary to make reasonable progress in the mandatory Class I Federal area.<sup>95</sup>

The RHR also requires that the

[P]lan revision ... must provide procedures for continuing consultation between the State ... on the implementation of the visibility protection program required by this subpart, including development and review of implementation plan revisions and progress reports, and on the implementation of other programs having the potential to contribute to impairment of visibility in mandatory Class I Federal areas.<sup>96</sup>

In its 2017 amendments to the RHR EPA explained that “states *must* exchange their four-factor analyses and the associated technical information that was developed in the course of devising their long-term strategies. This information includes modeling, monitoring and emissions data and cost and feasibility studies.”<sup>97</sup> In the event of a recalcitrant state, “[t]o the extent that one state does not provide another other state with these analyses and information, or to the extent that the analyses or information are materially deficient, the latter state should document this fact so that the EPA can assess whether the former state has failed to meaningfully comply with the consultation requirements.”<sup>98</sup>

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<sup>95</sup> 40 C.F.R. § 51.308(f)(2) (emphasis added); *see also*, 64 Fed. Reg. 35,765, 35,735 (July 1, 1999) (In conducting the four-factor analysis, EPA explained that “...the State must consult with other States which are anticipated to contribute to visibility impairment in the Class I area under consideration ... any such State must consult with other States before submitting its long-term strategy to EPA.”).

<sup>96</sup> 40 C.F.R. § 51.308(f)(4).

<sup>97</sup> 82 Fed. Reg. at 3088 (emphasis added).

<sup>98</sup> *Id.*

### **A. LDEQ's Consultation with Arkansas Was Flawed.**

LDEQ's SIP indicates that it consulted with only one state (Arkansas) and the Federal Land Managers, and that the state has "worked closely" with Arkansas to address emissions "affecting Louisiana's Class I areas."<sup>99</sup> These consultations are incomplete and do not satisfy multiple portions of 40 CFR 51.308(f)(2). In particular, LDEQ does not indicate that Louisiana and Arkansas discussed which sources should be evaluated or how the states decided whether additional controls should be required from sources in *either* state to protect visibility in the other. This is a foundational requirement of state-to-state consultations. Section 51.308(f)(2)(ii) requires that "[t]he State must consult with those States that have emissions that are reasonably anticipated to contribute to visibility impairment in the mandatory Class I Federal area *to develop coordinated emission management strategies* containing the emission reductions necessary to make reasonable progress (emphasis added)." LDEQ's cursory statement that it consulted with Arkansas about interstate emissions "affecting Louisiana's Class I areas" is not only inadequate on its face, but it does not address the other side of the equation—how do Louisiana's sources affect Arkansas's Class I areas and whether additional emission reductions are necessary to protect visibility. Moreover, there is nothing in the record demonstrating that Louisiana and Arkansas exchanged their four-factor analyses and the associated technical information, including modeling, monitoring and emissions data and cost and feasibility studies, to determine whether additional emission reductions are necessary to ensure reasonable progress.<sup>100</sup>

### **B. LDEQ Failed to Consult with Alabama on the Impacts of Emissions from Stationary Sources in Mobile, Alabama.**

On July 9, 2021, EPA issued a memorandum titled, "Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period."<sup>101</sup> EPA's memorandum encourages states to consider environmental justice when developing their regional haze SIPs.<sup>102</sup>

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<sup>99</sup> Proposed SIP at 39-40.

<sup>100</sup> See 82 Fed. Reg. at 3088.

<sup>101</sup> July 2021 Memo, <https://www.epa.gov/visibility/clarifications-regarding-regional-haze-state-implementation-plans-second-implementation>

<sup>102</sup> *Id.* at 15 ("5.6. Environmental Justice EPA encourages states to consider whether there may be equity and environmental justice impacts when developing their regional haze strategies for the second planning period. This consideration could occur in different ways, including undertaking meaningful outreach to environmental justice communities; ensuring adequate opportunity for feedback on states' proposed strategies; and considering equity and environmental justice impacts as part of the technical analyses supporting the SIP, including source selection and four-factor analyses. For example, states could consider environmental justice when they consider the appropriate inclusivity of source selection and the suite of emissions control options that should be analyzed, and when they exercise their discretion in determining what is necessary to make reasonable progress towards the

In developing its proposed regional haze SIP LDEQ acknowledges that emissions from Alabama’s stationary sources impact the Breton Wilderness Area,<sup>103</sup> but it did not consult with the State of Alabama on sources under Alabama Department of Environmental Management’s (ADEM) jurisdiction that impact visibility at Breton.<sup>104</sup> Notably, the Mobile, Alabama area shows the poverty rate and the percentage of the population that is White and Black for Alabama, Mobile County and communities surrounding the Mobile area.

**Table 7: Select Alabama and Mobile Area Demographics**

Area	White <sup>105</sup> Population %	Black Population %	Poverty Rate
Alabama <sup>106</sup>	65.3%	26.8%	15.5%
Mobile County <sup>107</sup>	56.5%	36.2%	17.7%
Mobile (city) <sup>108</sup>	41.8%	51.5%	20.7%
Chickasaw <sup>109</sup>	47.5%	46%	37%
Prichard <sup>110</sup>	7.8%	89.7%	31.5%

national visibility goal. In general, we encourage states to be aware of where sources of visibility impairing air pollutants are located and impacts, they may have on environmental justice communities. States have discretion to consider environmental justice in determining the measures that are necessary to make reasonable progress and formulating their long-term strategies, as long as such consideration is reasonable and not contrary to the regional haze requirements.)

<sup>103</sup> See, e.g., Proposed SIP at pdf 858 (“LDEQ determined that those emission levels from the Nucor Steel Louisiana LLC – Nucor Steel Direct Reduced Iron Facility would not have a measurable impact on visibility impairment at the Breton Wilderness Area relative to hundreds of other stationary sources located in Louisiana, Mississippi, Texas, Alabama, Florida, and the Gulf of Mexico.”).

<sup>104</sup> Proposed SIP at 40 (In describing how it allegedly met just one of the rule’s requirements—40 C.F.R. § 51.308(f)(2)(ii)— LDEQ explains that “Louisiana consulted with Arkansas on areas of concern and has worked closely with each to cover emissions affecting downwind areas and interstate emissions affecting Louisiana's Class I areas.”).

<sup>105</sup> All demographic statistics given in this paragraph that identifies a group as white means “white alone, not Hispanic or Latino.”

<sup>106</sup> *QuickFacts: Alabama*, UNITED STATES CENSUS BUREAU, <https://www.census.gov/quickfacts/fact/table/AL/PST045219>.

<sup>107</sup> *QuickFacts: Mobile County, AL*, UNITED STATES CENSUS BUREAU, <https://www.census.gov/quickfacts/fact/table/mobilecountyalabama/RHI225219>.

<sup>108</sup> *QuickFacts: Mobile city, AL*, UNITED STATES CENSUS BUREAU, <https://www.census.gov/quickfacts/fact/table/mobilecityalabama/RHI225219>.

<sup>109</sup> *QuickFacts: Chickasaw city, AL*, UNITED STATES CENSUS BUREAU, <https://www.census.gov/quickfacts/fact/table/chickasawcityalabama/RHI225219>.

<sup>110</sup> *QuickFacts: Prichard city, AL*, UNITED STATES CENSUS BUREAU, <https://www.census.gov/quickfacts/fact/table/prichardcityalabama/PST045219>.

Africatown <sup>111</sup>	2%	97%	63% <sup>112</sup>
Crichton <sup>113</sup>	8%	90%	50% <sup>114</sup>

impacting the environmental justice communities also impact the Breton Wildlife Class I area that is approximately 100 miles away. This intense cluster of polluting industrial facilities,<sup>115</sup> includes the following industries:

- Four existing steel mills.<sup>116</sup>
- More than 30 chemical companies;<sup>117</sup>

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<sup>111</sup> Because Africatown is a historic neighborhood and not a municipality, the census bureau does not offer demographic data. Therefore, the area around the Kimberly-Clark Corporation, which is located in Africatown, will be used as a proxy to model Africatown demographics. ECHO reports from EPA.gov provide various socioeconomic of the population surrounding Kimberly-Clark. *See* Demographic Profile of Surrounding Area (1 Mile), ECHO Detailed Facility Report: Kimberly-Clark Corporation, U.S. EPA, <https://echo.epa.gov/detailed-facility-report?fid=110058122259>.

<sup>112</sup> To survey a large enough population to generate statistics, the profile of the area surrounding Kimberly-Clark had to be increased from 1 mile to 3 miles. Additionally, the statistics measure the percentage of residents with low income and not necessarily below the federal poverty line. *See* Demographic Profile of Surrounding Area (3 Mile), ECHO Detailed Facility Report: Kimberly-Clark Corporation, U.S. EPA, <https://echo.epa.gov/detailed-facility-report?fid=110058122259>.

<sup>113</sup> Because Crichton is a neighborhood and not a municipality, the census bureau does not offer demographic data. Therefore, ASM Recycling, Inc., which is located in Crichton, will be used as a proxy to model Crichton demographics. ECHO reports from EPA.gov provide various socio-economics of the population surrounding ASM Recycling Inc. *See* Demographic Profile of Surrounding Area (1 Mile), ECHO Detailed Facility Report ASM Recycling Inc., U.S. EPA, <https://echo.epa.gov/detailed-facility-report?fid=110009692840>.

<sup>114</sup> In order to survey a large enough population to generate statistics, the profile of the area surrounding ASM Recycling Inc. had to be increased from 1 mile to 3 miles. Additionally, the statistics measure the percentage of residents with low income and not necessarily below the federal poverty line. *See* Demographic Profile of Surrounding Area (3 Mile), ECHO Detailed Facility Report ASM Recycling Inc., U.S. EPA, <https://echo.epa.gov/detailed-facility-report?fid=110009692840>.

<sup>115</sup> *Chemicals: Catalyst for Growth*, ALABAMA POWER, [https://mobilechamber.com/wpcontent/uploads/2019/06/2019\\_MAST\\_Brochure\\_MARCH28\\_in-order.pdf](https://mobilechamber.com/wpcontent/uploads/2019/06/2019_MAST_Brochure_MARCH28_in-order.pdf). A substantial portion of Alabama's

chemicals sector is concentrated in the MAST Chemical Corridor, near the port city of Mobile. The MAST corridor is home to 25 chemical manufacturers and a total of 27 facilities. *Id.*

<sup>116</sup> AM/NS Calvert, Outokumpu Stainless, SSAB America and Berg Spiral Pipe. *See* Mobile Area Chamber of Commerce, Industry Clusters, <https://mobilechamber.com/economic-development/doing-business-in-mobile/industry-clusters/#1496166599682-5d8ac0de-a84b>.

<sup>117</sup> *See* Mobile Area Chamber of Commerce, Industry Clusters, Chemical, [http://mobilechamber.com/wp-content/uploads/2020/08/IndustryProfiles-V4\\_Chemical\\_06252020.pdf](http://mobilechamber.com/wp-content/uploads/2020/08/IndustryProfiles-V4_Chemical_06252020.pdf).



- 15 aerospace companies and eight military bases;<sup>118</sup>
- Maritime facilities;<sup>119</sup> and
- More than 200 business supporting oil and gas development including three refineries and petroleum storage and transport facilities.<sup>120</sup>

Moreover, the EJ communities of Prichard, Chickasaw, Crichton and Africatown are overburdened with sources of air pollution and are in some of the highest percentile categories for pollution for the selected EJ Index air quality variables as shown below<sup>121</sup>

<b>EJ Index for Selected Variables</b>	<b>Prichard<sup>122</sup></b>	<b>Chickasaw<sup>123</sup></b>	<b>Creighton<sup>124</sup></b>	<b>Africatown<sup>125</sup></b>
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<sup>118</sup> See Mobile Area Chamber of Commerce, Industry Clusters, Aerospace, [http://mobilechamber.com/wp-content/uploads/2020/08/IndustryProfiles-V4\\_Aerospace\\_08262020.pdf](http://mobilechamber.com/wp-content/uploads/2020/08/IndustryProfiles-V4_Aerospace_08262020.pdf).

<sup>119</sup> See Mobile Area Chamber of Commerce, Industry Clusters, Maritime, [https://mobilechamber.com/wp-content/uploads/2019/08/IndustryProfiles-V4\\_Maritime\\_2019.pdf](https://mobilechamber.com/wp-content/uploads/2019/08/IndustryProfiles-V4_Maritime_2019.pdf)

<sup>120</sup> See Mobile Area Chamber of Commerce, Industry Clusters, Oil and Gas, [https://mobilechamber.com/wp-content/uploads/2019/08/IndustryProfiles-V4\\_OilGas\\_2019.pdf](https://mobilechamber.com/wp-content/uploads/2019/08/IndustryProfiles-V4_OilGas_2019.pdf).

<sup>121</sup> All data is expressed in percentile for State of Alabama/EPA Region 4/United States, respectively, for each area. Percentile for State of Alabama is bolded.

<sup>122</sup> EJScreen Report – 3 Mile Ring, U.S. EPA, [https://ejscreen.epa.gov/mapper/mobile/EJSCREEN\\_mobile.aspx?geometry={%22x%22:-88.078146,%22y%22:30.738648,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&basemap=streets&distance=3](https://ejscreen.epa.gov/mapper/mobile/EJSCREEN_mobile.aspx?geometry={%22x%22:-88.078146,%22y%22:30.738648,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&basemap=streets&distance=3). The EJScreen report was created using Stokley Garage at the center of the 3-mile ring since it is located in Prichard near the center of town.

<sup>123</sup> EJScreen Report – 3 Mile Ring, U.S. EPA, [https://ejscreen.epa.gov/mapper/mobile/EJSCREEN\\_mobile.aspx?geometry={%22x%22:-88.059471,%22y%22:30.758831,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&basemap=streets&distance=3](https://ejscreen.epa.gov/mapper/mobile/EJSCREEN_mobile.aspx?geometry={%22x%22:-88.059471,%22y%22:30.758831,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&basemap=streets&distance=3). The EJScreen report was created using Honeywell – UOP LLC at the center of the 3-mile ring since it is located in Chickasaw, and it is a major air emissions source.

<sup>124</sup> EJScreen Report – 3 Mile Ring, U.S. EPA, [https://ejscreen.epa.gov/mapper/mobile/EJSCREEN\\_mobile.aspx?geometry={%22x%22:-88.10607,%22y%22:30.70722,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&basemap=streets&distance=3](https://ejscreen.epa.gov/mapper/mobile/EJSCREEN_mobile.aspx?geometry={%22x%22:-88.10607,%22y%22:30.70722,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&basemap=streets&distance=3). This data is once again using ASM Recycling, Inc as a proxy for the Crichton area. Since the Creighton neighborhood is found in zip code 36607, a search for all permitted facilities in this zip code was conducted. According to ECHO at EPA.gov, there are 34 total facilities requiring permits, and six of those facilities required air permits. See ECHO Facility Search Results – 36607, U.S. EPA, <https://echo.epa.gov/facilities/facility-search/results>.

<sup>125</sup> EJScreen Report – 3 Mile Ring, U.S. EPA,

PM <sub>2.5</sub>	89/82/84	90/84/85	82/75/78	90/83/84
Ozone	90/82/81	90/83/82	82/75/75	90/83/82

## 6. Selected Source Examples

The Conservation Organizations identified more than 45 industrial facilities in Alabama potentially affecting visibility in 24 regional Class I areas.<sup>126</sup> The following are examples of facilities on NPCA’s list – along with others – that demonstrate the need for LDEQ to consult with Alabama regarding sources in the Mobile area that impact the Breton Wildlife Refuge to determine which sources need a four-factor analysis and emission controls.

### a. AMS/NS Calvert’s New Steel Plant

ADEM recently issued a Prevention of Significant Deterioration permit to construct to AMS/Calvert for construction of its two new meltshops and associated emission units.<sup>127</sup> Despite a Q/d of greater than 20 for the proposed new SO<sub>2</sub> and NO<sub>x</sub> emissions (PTE 675 tpy and 695 tpy, respectfully), and ADEM’s assertions that it met consultation requirements, contrary to the RHR’s legal requirements ADEM provided no information to the public that it consulted with Louisiana and the U.S. FWS regarding regional haze impacts to Breton..<sup>128</sup> ADEM’s response to comments

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[https://ejscreen.epa.gov/mapper/mobile/EJSCREEN\\_mobile.aspx?geometry={%22x%22:-88.0483,%22y%22:30.736214,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&](https://ejscreen.epa.gov/mapper/mobile/EJSCREEN_mobile.aspx?geometry={%22x%22:-88.0483,%22y%22:30.736214,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&)

[basemap=streets&distance=3](https://ejscreen.epa.gov/mapper/mobile/EJSCREEN_mobile.aspx?geometry={%22x%22:-88.0483,%22y%22:30.736214,%22spatialReference%22:{%22wkid%22:4326}}&unit=9035&areatype=&areaid=&basemap=streets&distance=3). This data was created using Kimberly-Clark Corporation as a proxy for the Africatown area. According to the company’s latest application for a Title V permit renewal, Kimberly-Clark Corporation is considered a major source for NO<sub>x</sub>, CO, Filterable PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC. *See* Major Source Operating Permit Renewal Application (MSOP No. 503-2012) – Kimberly-Clark Corporation, Table 4-1 (Nov. 9, 2020), <http://f.adem.alabama.gov/WebLink/DocView.aspx?id=104468086&dbid=0&cr=1>.

<sup>126</sup> NPCA, Regional Haze Fact Sheet, Alabama (May 2021),

<https://drive.google.com/file/d/13fZEeof5qipmAEeDL2juU4F4pJEw967L4/view>.

<sup>127</sup> The new emission units include: two meltshops, each with one 331 TPH EAF, ladle preheating activities totaling 56.30 MM Btu/hr, tundish preheating activities totaling 21.15 MMBtu/hr, one LMF, one continuous caster, one degassing operation, and in meltshop #1 only, RH preheating activities totaling 32.89 MM Btu/hr; material handling; slag processing and handling operations; seven emergency diesel engines; and scarfing operations. ADEM PSD Permit Nos. 503-0095-X038, 503-0095-X040, 503-0095-X041, 503-0095-X042, and 503-0095-X043, for AM/NS Calvert, LLC Steel Mill, Facility No. 503-0095, located at 1 AMNS Way in Calvert, Alabama, final PSD permit issued by ADEM on March 29, 2021, [33818 503-0095 097 03-29-2021 PSDD RJR New Meltshops X038-X043 Final PSD Determination \(alabama.gov\)](https://www.adem.alabama.gov/33818-503-0095-097-03-29-2021-PSDD-RJR-New-Meltshops-X038-X043-Final-PSD-Determination).

<sup>128</sup> GASP, Inc. comments on proposed PSD permit, [33818 503-0095 097 03-09-2021 PCOMM RJR PSD X038-X043 GASP Comments \(alabama.gov\)](https://www.adem.alabama.gov/33818-503-0095-097-03-09-2021-PCOMM-RJR-PSD-X038-X043-GASP-Comments). Calvert PSD application modeling (Dec. 17, 2020), [33818 503-0095 097 01-12-2021 PSDA RJR New Meltshops modelling ADD](https://www.adem.alabama.gov/33818-503-0095-097-01-12-2021-PSDA-RJR-New-Meltshops-modelling-ADD)

on the regional haze issues explained that “[a] regional haze analysis was performed for the Breton Wildlife Refuge as appropriate”<sup>129</sup> but there is no information in either ADEM’s PSD permitting record or LDEQ’s proposed RH SIP demonstrating a four-factor analysis was conducted. Moreover, recent construction in Sweden, demonstrates technology capable of producing steel using fossil fuel-free hydrogen gas rather than coking coal for production processes, which must be considered in a four-factor analysis.<sup>130</sup>

b. Alabama Power Company’s Barry Steam Electric Generating Plant

Alabama Power Company has operated the Barry Steam Plant in Bucks, Alabama, which is in Mobile County, since the early 1950s.<sup>131</sup> While for decades it operated with 5 coal units, presently, it has two aging coal-fired units, Units 4 and 5, which have been in operation for more than 50 years.<sup>132</sup> Unit 4 has *no controls* for its emissions of SO<sub>2</sub>.<sup>133</sup> As explained in the Petition requesting that EPA’s Administrator object to ADEM’s issuance of the Title V Permit to Alabama Power for Plant Barry, which is of significant concern due to impacts to the nearby environmental justice communities, air dispersion modeling demonstrates that the permitted limits can lead to SO<sub>2</sub> levels as high as 681 ug/m<sup>3</sup> or 430 ug/m<sup>3</sup> (depending on what limit one of the coal units complies with), versus the NAAQS limit of 196.2 ug/m<sup>3</sup> -- exceedances over two or three times the allowable health-based limit.<sup>134</sup>

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([alabama.gov](http://alabama.gov)); updated PSD application (Dec. 31, 2020), [33818 503-0095 097 12-31-2020 PSDA RJR New Meltshops REV APP \(alabama.gov\)](https://www.adem.alabama.gov/psd/33818-503-0095-097-12-31-2020-PSDA-RJR-New-Meltshops-REV-APP).

<sup>129</sup> ADEM’s response to comments at 3-4, [33818 503-0095 097 03-29-2021 RPC RJR PSD X038-X043 GASP Comments Response \(alabama.gov\)](https://www.adem.alabama.gov/psd/33818-503-0095-097-03-29-2021-RPC-RJR-PSD-X038-X043-GASP-Comments-Response).

<sup>130</sup> Michael Holder, “A major breakthrough for the clean steel industry,” GreenBiz (July 1, 2021), <https://www.greenbiz.com/article/major-breakthrough-clean-steel-industry>.

<sup>131</sup> Sierra Club and GASP, Inc. Petition to EPA’s Administrator to Object to the Issuance of the Title V Permit No. 503-1001 for Alabama Power Company’s Barry Steam Electric Generating Plant at 5, citing Expert Report by William L. Hall at Section 3.2, *Labauve v. Olin Corp. Arch Chems.*, 231 F.R.D. 632 (S.D. Ala. Dec. 8, 2004) (No. 1:03-cv-00567), 2004 WL 3607471, [https://www.epa.gov/sites/production/files/2021-04/documents/apc\\_barry\\_petition\\_3-30-21.pdf](https://www.epa.gov/sites/production/files/2021-04/documents/apc_barry_petition_3-30-21.pdf). (“Plant Barry Petition to Object”) *See also*, EPA Region 4 Title V file depot for the draft and final permit, comments submitted by the Conservation Organizations and ADEM’s responses, <https://www.epa.gov/caa-permitting/alabama-proposed-title-v-permits>. (“EPA Region 4 Files”)

<sup>132</sup> Plant Barry Petition to Object at 6, citing Test. of Larry W. Loos at A-17, *In the Matter of AmerenUE*, No. ER-2010-0036, (Mo. Pub. Serv. Comm’n July 24, 2009), available at <https://www.efis.psc.mo.gov/mpsc/commoncomponents/viewdocument.asp?DocId=935482519>.

<sup>133</sup> Alabama Power Company, Statement of Basis, Barry Steam Electric Generating Plant, MSOP No. 503- 1001 at 2-3, <http://adem.alabama.gov/newsEvents/notices/jun20/pdfs/6alpowerbarry-basis.pdf>.

<sup>134</sup> Plant Barry Petition to Object at 2.

c. Plains Marketing, L.P. – Mobile Terminal<sup>135</sup>

Plains operates a petroleum bulk storage and transfer terminal located in Mobile, which has the capability of receiving crude oil, petroleum liquids, and ethanol via ships, barges, tank trucks, or pipeline. Compared to similar facilities, ADEM's draft Title V permit did not cover all emitting units, all pollutants and lacked practically enforceable permit conditions to control criteria pollutant emissions, including VOCs, SO<sub>2</sub> and NO<sub>x</sub> emissions.<sup>136</sup>

d. Kimberly-Clark-Mobile Operations<sup>137</sup>

Kimberly-Clark operates a tissue, towel, and napkin mill located in Mobile and in its Title V permit renewal application estimated plantwide NO<sub>x</sub> emissions are "controlled" at 107 tons per year.<sup>138</sup> Yet, as explained in comments submitted by Conservation Organizations to ADEM, there are significant issues with the draft permit, all of which have the potential to impact visibility at Breton: (i) the public has no assurance the facility will accurately report NO<sub>x</sub> emissions because the draft permit proposed unfettered discretion to ADEM's director to approve alternative methods;<sup>139</sup> (ii) while the draft permit purports to create synthetic minor emission limits that would allow the company to escape PSD permit requirements, the permit conditions are not practically enforceable;<sup>140</sup> and (iii) contrary to the statutory requirements for disclosure, Kimberly Clark and ADEM withheld emissions data, thwarting the public from meaningful participation.<sup>141</sup>

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<sup>135</sup> ADEM public notice, <http://adem.alabama.gov/newsEvents/notices/oct20/10plains.html>; ADEM draft permit, <http://adem.alabama.gov/newsEvents/notices/oct20/pdfs/10plains.pdf>; ADEM Statement of Basis, <http://adem.alabama.gov/newsEvents/notices/oct20/pdfs/10plains-basis.pdf>.

<sup>136</sup> GASP, Inc. *et al* comments on ADEM's draft Title V permit and enclosures, <https://www.scribd.com/document/515380704/GASPetaltCmttLetterPlainsMkting-342021-FINALasFILED>. ("Conservation Organizations Comments on Kimberly-Clark Draft Title V Permit")

<sup>137</sup> ADEM's public notice, <http://adem.alabama.gov/newsEvents/notices/mar21/3kimberly.html>; ADEM's draft Title V permit, <http://adem.alabama.gov/newsEvents/notices/mar21/pdfs/3kimberly.pdf>; ADEM's SOB, <http://adem.alabama.gov/newsEvents/notices/mar21/pdfs/3kimberly-basis.pdf>. GASP, Inc. *et al* comments, <https://www.scribd.com/document/515380389/FINAL-GASP-Comment-on-KC-2021-Renewal-T5>.

<sup>138</sup> Kimberly Clark Title V Renewal Application at pdf 54, <http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104468086&dbid=0&cr=1>.

<sup>139</sup> Conservation Organizations Comments on Kimberly-Clark Draft Title V Permit at pdf 11-13.

<sup>140</sup> *Id.* at pdf 13-17.

<sup>141</sup> *Id.* at pdf 17-21.

e. UOP LLC Mobile Plant (UOP)

The UOP facility is a chemical production plant that produces synthetic materials to be used as adsorbents and/or catalyst in various manufacturing applications. Several emission points at the facility produce NO<sub>x</sub> emissions, and yet the permit lacks controls, monitoring, recordkeeping and reporting requirements.<sup>142</sup> Thus, in addition to other issues recently raised in a petition to EPA's Administrator,<sup>143</sup> it appears this is another facility in need of a four-factor analysis.

7. *LDEQ Must Meet Its State-to-State Consultation Responsibilities With Alabama.*

Before submitting its proposed RH plan to EPA for review LDEQ must consult with Alabama because Alabama has sources with emissions that contribute to visibility impairment at Breton Wildlife Refuge<sup>144</sup> and LDEQ's proposed SIP does not demonstrate it consulted with Alabama. Second, LDEQ's SIP must demonstrate that it includes all measures agreed to during state-to-state consultations or a regional planning process, or measures that will provide equivalent visibility improvement,<sup>145</sup> which the State has not done. Third, LDEQ must take into consideration the emission reduction measures identified by Alabama,<sup>146</sup> and there is no evidence LDEQ has obtained and considered this information. Fourth, the RHR rules requires that the plan revision include procedures for continuing consultation between the Louisiana and Alabama, including development and review of implementation plan revisions and progress reports, and on the

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<sup>142</sup> UOP SOB at pdf 9 ("The Line 6A Kiln process emissions are routed to 11960 Bag Collector (EP-079). For certain products, process emissions can contain nitrogen oxides (NO<sub>x</sub>) emissions. Since the bag collector has no numerical NO<sub>x</sub> limits, no periodic monitoring is required."); *id.* at 11 ("The DeNO<sub>x</sub> Unit (EP-105) is permitted under Molecular Sieve Production Line 6 (Process Unit No. 012). For certain products, process emissions from the dryer can be routed through a baghouse to the DeNO<sub>x</sub> Unit. Since the high temperature dryer has no numerical NO<sub>x</sub> limits, no periodic monitoring is required."); and *id.* at 26 ("The DeNO<sub>x</sub> Unit (EP-129) was installed voluntarily to prevent visible emissions. During the production of certain products that contain nitrogen oxides (NO<sub>x</sub>) emissions, the No. 15 Kiln (EP-127) process emissions are routed to the DeNO<sub>x</sub> Unit (EP-129). The facility shall operate and maintain the DeNO<sub>x</sub> Unit according to manufacturer's instructions.")

<sup>143</sup> GASP, Inc. Petition to Object to the Issuance of the Title V Permit No. 503-8010 for UOP LLC Mobile Plant, [https://www.epa.gov/sites/production/files/2021-04/documents/uop\\_llc\\_petition\\_4-2-21.pdf](https://www.epa.gov/sites/production/files/2021-04/documents/uop_llc_petition_4-2-21.pdf). ADEM public notice, <http://adem.alabama.gov/newsEvents/notices/jul20/7uop.html>; ADEM draft permit, <http://adem.alabama.gov/newsEvents/notices/jul20/pdfs/7uop.pdf>; ADEM SOB, <http://adem.alabama.gov/newsEvents/notices/jul20/pdfs/7uop-basis.pdf>.

<sup>144</sup> 40 C.F.R. § 51.308(f)(2)(ii).

<sup>145</sup> *Id.* § 51.308(f)(2)(ii)(A).

<sup>146</sup> *Id.* § 51.308(f)(2)(ii)(B).

implementation of other programs having the potential to contribute to impairment of visibility in mandatory Class I Federal areas,<sup>147</sup> and LDEQ's proposed RH SIP lacks these provisions. Finally, in light of the impacts from polluting sources to Mobile's environmental justice communities, we urge LDEQ to carefully and meaningfully take the time to consult with ADEM.

### **C. LDEQ's Consultation With the Federal Land Managers is Flawed and Incomplete.**

The Louisiana-Federal Land Manager consultation is similarly flawed because it does not appear that FLMs have had any opportunity to comment on any aspect of Louisiana's four-factor analyses. In its proposal, LDEQ indicates that the agency LDEQ is "presenting this draft copy [to the FLMs] seeking their input"<sup>148</sup> In other words, LDEQ failed to consult with the Federal Land Managers until *after* the state already developed and issued its proposed SIP, making it impossible for the Federal Land Managers' recommendations to "meaningfully inform the State's decisions on the long-term strategy," as required by 40 C.F.R. § 51.308(i)(2). The proposed SIP also fails to include any information on whether or how LDEQ has addressed any FLM comments or concerns to date, as required by 40 C.F.R. § 51.308(i)(2). In essence, the LDEQ SIP transforms the Regional Haze Rule's mandatory and iterative FLM consultation process into pro forma, after-the-fact box-checking exercise. The FLM consultation provisions, however, are designed to both meaningfully inform the development of the SIP, and provide the public with an opportunity to evaluate the FLM's comments and comment on the state's implementation of those recommendations. comments. 82 Fed. Reg. at 3116. To comply with the letter and purpose of the regulation, LDEQ must meaningfully evaluate and incorporate the FLM's comments in a proposed SIP and provide the public an opportunity to comment.

## **IV. LDEQ SHOULD ANALYZE THE ENVIRONMENTAL JUSTICE IMPACTS OF THE PROPOSED SIP.**

We urge LDEQ to take impacts to Environmental Justice communities into consideration as it evaluates all sources that impact regional haze. Indeed, sources that impact our treasured Class I areas also impact several environmental justice communities. Entergy's R.S. Nelson coal-burning plant, for example, is located just outside the lower-income, predominately black community of Mossville, Louisiana, which has been referred to as "quite possibly the most polluted corner of the most polluted region in one of the most polluted states in the United States."<sup>149</sup> Mossville

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<sup>147</sup> *Id.* § 51.308(f)(4).

<sup>148</sup> Proposed SIP at 40.

<sup>149</sup> Environmental Justice Atlas, "Mossville, Louisiana: Environmental Racism in 'Cancer Alley,' United States" (Mar. 25, 2018), <https://ejatlas.org/conflict/mossville-louisiana-environmentalracism-united-states>.

and the nearby towns of Sulphur, Carlyss, and Westlake are all predominately minority and have a high concentration of industrial facilities, many of which manufacture, process, or dispose of toxic materials and other pollutants.<sup>150</sup> In fact, the Louisiana municipalities of Mossville, Sulphur, Carlyss, and Westlake occupy only 1,094 square miles, a mere .028 percent of the square mileage of the United States; its population of approximately 203,436 represents only .06 percent of the United States population. Yet this area is subject to at least 5 percent of the entire nation's releases of toxic chemicals. Similarly, communities in the industrial corridor in Louisiana between New Orleans and Baton Rouge, known as "Cancer Alley" near the Big Cajun II power plants and numerous other major sources of haze pollution, have greater exposure than the general population to nine high-priority chemicals: 1,1,2-TCE, 1,2-DCP, EDB, 1,1-DCA, DBP, phthalic anhydride, formaldehyde, 1,3-butadiene, and EDC. By evaluating facilities like R.S. Nelson and Big Cajun II, neither of which has modern pollution controls, we believe LDEQ will identify emission-reducing options that will not only improve visibility in Class I areas, but will improve air quality for these impacted communities.

There are numerous bases for LDEQ to take Environmental Justice impacts into consideration in developing its Regional Haze SIP. First, in evaluating reasonable progress under the Clean Air Act, the state must consider all "non-air quality environmental impacts of compliance." Although the Regional Haze Rule does not define "non-air quality environmental impacts," the BART Guidelines, which should inform a state's reasonable progress analysis, explain that the term should be interpreted broadly. Moreover, under the Clean Air Act, states are permitted to include in a SIP measures that are authorized by state law but go beyond the minimum requirements of federal law.<sup>151</sup> Environmental justice impacts are the types of "non-air quality environmental" impacts that LDEQ should consider and doing so is consistent with the Clean Air Act.

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<sup>150</sup> *Id.* (noting that "14 industrial plants surround what remains of the community, making it potentially one of the most polluted locales in one of the most polluted regions of the country").

<sup>151</sup> See *Union Elec. Co v. EPA*, 427 U.S. 246, 265 (1976) ("States may submit implementation plans more stringent than federal law requires and . . . the Administrator must approve such plans if they meet the minimum requirements of s 110(a)(2)."); *Ariz. Pub. Serv. Co. v. EPA*, 562 F.3d 1116, 1126 (10th Cir. 2009) (quoting *Union Elec. Co.*, 427 U.S. at 265) ("In sum, the key criterion in determining the adequacy of any plan is attainment and maintenance of the national air standards . . . 'States may submit implementation plans more stringent than federal law requires and [ ] the [EPA] must approve such plans if they meet the minimum [Clean Air Act] requirements of § 110(a)(2).'""); *BCCA Appeal Group v. EPA*, 355 F.3d 817, 826 n. 6 (5th Cir. 2003) ("Because the states can adopt more stringent air pollution control measures than federal law requires, the EPA is empowered to disapprove state plans only when they fall below the level of stringency required by federal law.").

Second, consideration of Environmental Justice impacts is also consistent with EPA's recent guidance in implementing the Regional Haze Rule. Indeed, on July 8, 2021, EPA issued guidance explicitly "encourag [ing] states to consider whether there may be equity and environmental justice impacts when developing their regional haze strategies for the second planning period," including by taking such concerns into account in their source selection and four-factor analyses.<sup>152</sup> EPA's guidance makes clear that states may consider beneficial Environmental Justice impacts under the "non-air quality environmental impacts" reasonable progress factor.<sup>153</sup> EPA has also endorsed the consideration of guidance intended for use in environmental impact assessments under the National Environmental Policy Act, which includes guidance for evaluating Environmental Justice, as part of its Regional Haze planning process.<sup>154</sup>

Finally, consideration of the beneficial environmental impacts of additional Regional Haze emission reductions would be consistent with, and would further, the nation's environmental justice policy goals. Under Executive Order 12,898, Federal agencies must ensure they are achieving environmental justice goals as a part of their mission. To further that, President Biden's Executive Order 13,990 directs agencies to review and correct federal regulations and agency actions over the last four years that conflict with the national objectives to advance and prioritize environmental justice, and to conserve and protect our national treasures and monuments consistent with federal law. Executive Order 14,008 builds on, and reaffirms, the Biden Administration's commitment to environmental justice, and directs EPA to strengthen the enforcement of the Clean Air Act. Given the plain intent of President Biden's Executive Order that EPA consider environmental justice concerns in implementing the Clean Air Act, the state should consider the environmental justice impacts of its Second Planning Period SIP both for sources located in disproportionately impacted communities, and further downwind.

Although LDEQ is not bound to adhere to those recent Executive Orders, it certainly has authority to take those factors into consideration. And even if LDEQ refuses to evaluate those impacts, EPA will be required to consider Environmental Justice impacts in reviewing Louisiana's SIP submittal. Thus, as a matter of both good public policy and efficiency, LDEQ should analyze the environmental justice impacts of its second planning period haze SIP. For those sources located near a low-income or minority community that suffers disproportionate environmental

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<sup>152</sup> July 2021 Memo at 16.

<sup>153</sup> Guidance on Regional Haze State Implementation Plans for the Second Implementation Period, EPA-457/B-19-003 (Aug. 2019).

<sup>154</sup> *Id.* at 33. A collection of EPA policies and guidance related to the National Environmental Policy Act (NEPA) is available at <https://www.epa.gov/nepa/national-environmental-policy-act-policies-and-guidance>. One of these policies concerns Environmental Justice. *See*, <https://www.epa.gov/nepa/environmental-justice-guidance-national-environmental-policy-act-reviews>.



harms, LDEQ's four-factor analysis for that source should take into consideration how each considered measure would either increase or reduce the environmental justice impacts to the community. Such considerations will not only lead to sound policy decisions but are also pragmatic as pointed out above, where sectors and sources implicated under the regional haze program are of concern to disproportionately impacted communities in Louisiana. Thus, considering the intersection of these issues and advancing regulations accordingly will help deliver necessary environmental improvements across Clean Air Act programs and issue areas, reduce uncertainty for the regulated community, increase the state's regulatory efficiency, result in more rational decision making.

## V. CONCLUSION

We urge LDEQ to reevaluate its proposed SIP in light of EPA's July 8, 2021 Memo, which confirms that the proposed SIP is fundamentally flawed. Due to the deficiencies outlined above and in the attached reports, the state must revise and reissue a valid haze SIP for public notice and comment. Please do not hesitate to contact us with any questions or to discuss the matters raised in these comments.

Sincerely,



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