

Responses to CAAAC Comments on Draft CAA 50th Anniversary Report

Comment Sections

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#	Comment	WG Responses
1. Introduction		
1.1	pp. 7-8: The introduction should include a statement acknowledging that a hallmark of the Clean Air Act is that it calls for federal, state, local and tribal governments to implement the Act in partnership to reduce pollution.	Implemented.
1.2	p. 8, first paragraph, third sentence: Add “local” to parenthetical “(federal state, tribal).” “Those people include those who work in the government (federal, state, local , tribal), in companies, in non-governmental organizations, and as private citizens.” In addition, throughout the report, where there is reference made to “federal state and tribal,” “local” should be included as well (as a universal addition).	Implemented.
1.3	First- the report barely mentions the role of States in implementation of the Act. The Act was developed very much as a partnership between the Federal and State governments with the role of EPA to set the NAAQS, and the role of the states to implement programs to meet the NAAQS. It is, within the Act, the burden of the states to implement programs to meets the NAAQS, and it is the States who stand to be penalized (and penalized	Revisions were made to address, but the Work Group believes that the Report already repeatedly emphasized these points, including in the introduction.

	<p>heavily) for failure to do so. These responsibilities warrant a significant notation right up front, Indeed, the significant gains in air quality would not have been met without the actions of the states.</p> <p>Thus, I suggest something right in the introduction indicating that Congress recognized the range of air quality issues across the country , and determined that States were best positioned to determine how to meet the air quality needs within their jurisdiction. But Congress also recognized that oversight was necessary to ensure that all states took these responsibilities seriously, and so created the Act as a unique partnership between EPA and the states wherein EPA had responsibility for establishing the requirements and oversight of the State's actions while ultimate implementation responsibility remained with the states.</p> <p>I suggest coming back to this theme throughout, in such areas as transport (interstate), acid deposition, and of course funding.</p>	
2. Attainment and Maintenance of the NAAQS		
2.1	p. 11, Successes, paragraph 4 (transport), second sentence: Change "O3 transport commission in the northeast" to " Ozone Transport Commission in the Northeast. "	Implemented.
2.2	<p>p. 11, Future Challenges, #3: "Costs of Implementing Additional Controls: In many areas that have already implemented stringent rules and implemented expensive programs, achieving additional emission reductions may become cost-prohibitive to certain businesses, and nonattainment designations can have major economic impacts on certain key business sectors and restrict flexibility in transportation planning."</p> <p>I believe this statement is written with too much bias to be considered a fairly stated "challenge."</p>	In reviewing the existing language, the work group determined that there were already enough qualifications in this text such that further revision or qualification was not necessary or appropriate. The work group did separate the statement into two separate sentences to capture the two separate concepts.
2.3	Future Challenges: Add " Interstate transport of emissions continues to pose a serious challenge in many areas of the country. "	Implemented.

2.4	<p>p. 16, Recommendations: Revise as follows “Consider Requiring More Interstate Air Pollution Abatement: Given the large contribution of interstate air pollution to O3 and PM design values in nonattainment areas and “near-nonattainment” areas, EPA should require <u>more reductions in interstate</u> O3 and PM air pollution from <u>the upwind</u> states than is currently being achieved to <u>further better address the problem of interstate transport</u> air pollution. For example, EPA could increase its cost-per ton thresholds for point sources, expand its consideration of pollution sources beyond power plants and other point sources, or lower the level of air quality impact that would be considered “significant.” It could also encourage more states to create their own mobile source emission reduction incentive programs like California’s Carl Moyer program or Texas Emission Reduction Plan (TERP).”</p>	Changes accepted.
2.5	<p>Recommendations: Add “Develop a strong, sustainable transportation strategy with top priority placed on new federal programs to continue to reduce emissions from the mobile source sector: To assist state and local air agencies in achieving their clean air, public health protection and environmental justice goals, EPA should adopt federal regulations to achieve significant additional reductions in emissions of criteria pollutants and criteria pollutant precursors. especially NOx and PM. Especially regarding attainment and maintenance of the ozone NAAQS, most areas of the country are “NOx-limited,” meaning that they must reduce NOx emissions to succeed. EPA should focus on heavy-duty mobile source categories that states are largely precluded from regulating or for which federal controls are more efficient and effective, including highway heavy-duty trucks, locomotives, ocean-going vessels, aircraft and off-road engines.”</p>	No change to attainment/NAAQS section.

2.6	Recommendations: Add “ Continue and expand efforts to address the transport of air pollution: EPA should continue to work with eastern and midwestern states to ensure region-wide attainment. EPA should also work closely with state and local air pollution control agencies to assess transport in the western U.S. and put in place appropriate programs to address this problem. ”	Existing recommendation regarding interstate transport captures this.
2.7	p. 17, Recommendation 8, Transportation Conformity, first sentence: Add “National Association of Clean Air Agencies” and otherwise edit as follows: “Consider Updating Transportation Conformity Policies and Practices: EPA should work with the Association of Metropolitan Planning Organizations (AMPO), the American Association of State Highway and Transportation Officials (AASHTO), <u>the National Association of Clean Air Agencies (NACAA)</u> , and other stakeholders to review and update its transportation conformity rules and practices. Some find It there are significant inefficiencies in the current process, and <u>seek</u> targeted updates canto help ensure that EPA’s implementation of this requirement does not create an undue burden on transportation planning efforts. Others believe more should be done to ensure that the transportation conformity process works as it is intended, to ensure transportation plans conform to state plans to achieve and maintain clean air (i.e., State Implementation Plans) and not the other way around. EPA should also consider this in light of it The substantial emission reductions projected for on-road sources that have already been achieved and are expected to continue well into the future as a result of existing on-road mobile source controls implemented by EPA, states, local governments, and tribes were pursued and achieved in order to contribute to clean air and the protection of public health, not to make room for additional emissions from the transportation sector.	Since MPOs and State DOTs are the agencies tasked with actually carrying out transportation conformity, we felt it was important to single them out here. Since not all states participate in NACAA, we did not feel that it was appropriate to single them out for inclusion in the consultation, though we feel that they would be among those that EPA should consult with under the “other stakeholders.” The other requested changes would substantially alter the recommendation, putting it more in the category of identifying an issue or a challenge, so the workgroup declined to accept these suggested changes.
2.8	The report in a few places makes recommendations about actions EPA should take before an RIA has been completed to determine pros and cons.	The work group declined to make suggested changes to this text. The intent of the

	<p>For example, the report says EPA should consider requiring more interstate Ozone and PM emission reductions by considering changing the significance test and increasing the cost per ton threshold (see NAAQS recommendation 3, page 16). I think that the intent of this recommendation is not to suggest interstate reductions per se but rather to consider whether they would be appropriate and make a difference. I suggest a slight modification of the wording of this recommendation to make this point clear – the heading seems correct but the text might be misinterpreted to go farther: Consider All Sources of Requiring More Interstate Air Pollution Abatement: Given <u>the many sources of air pollution that can contribute the large contribution of interstate air pollution</u> to O3 and PM design values in nonattainment areas and “near-nonattainment” areas, EPA should <u>encourage states and local authorities initially to assess the relative contributions of local area, stationary, and mobile sources as well as from require more interstate O3 and PM air pollution from the states</u> than is currently being achieved to further interstate air pollution <u>reductions where they are needed to attain NAAQS</u>. For example, EPA could <u>encourage states to evaluate increasing increase</u> its cost per ton thresholds for point sources, <u>expanding expand</u> its consideration of pollution sources beyond power plants and other point sources, or <u>lowering lower</u> the level of air quality impact that would be considered “significant.” <u>for particular areas</u>. It could also encourage more states to create their own mobile source emission reduction incentive programs like California’s Carl Moyer program or Texas Emission Reduction Plan (TERP).</p> <p>The purpose of my recommended additions is to clarify that in some cases, the main contributors to non-attainment may be nearby area sources or mobile sources rather than far away stationary sources, and that although states should evaluate these issues, they should not be forced to make reductions on the assumption that transport is the problem, when that may not be the case.</p>	<p>recommendation is to encourage EPA to ensure that nonattainment and near-nonattainment areas get more help in attaining and maintaining the NAAQS from “upwind” states, given what we already know about the extent of those contributions and control levels. The suggested changes would alter this intent so that it would be encouraging “evaluation” of these factors instead. The workgroup believes that the information already available is sufficient to justify additional interstate pollution reductions, not just evaluating whether they are needed</p>
2.9	<p>I support other recommendations in this section concerning the role of international transport (recommendation 1.5), importance of implementing the exceptional events rule (Rec: #4), and alignment of implementation</p>	<p>The workgroup has added a “challenge” related to the timing of NAAQS applicability and PSD permitting to the Stationary Sources section, but</p>

	<p>rules with a new NAAQS (Rec# 1.6)</p> <p>It would be helpful to delay applicability of a new NAAQS for PSD purposes to provide transition times for new project investments. Added requirements in non-attainment areas are not specified for several years as states develop new SIP and LAER is specified for relevant sources. Yet, sources in attainment areas immediately must model air quality increments between the lower standard and background air quality levels which are often very narrow leaving little “headroom” for new investments that can improve efficiency and needed to remain competitive. Recommendation 3.1 on page 113 offers a similar suggestion for postponing initial designations.</p>	<p>believes that current caselaw may mean that the only way to address this would be through a legislative change to the Clean Air Act. We also note that while recommendation 3.1 in the Voluntary Programs section (now on page 116) would involve a one-year postponement of nonattainment designations, this would not address the concern expressed in this comment regarding the immediate applicability of revised NAAQS for PSD permitting upon promulgation.</p>
2.10	<p>Another suggestion in the report is to use the NAAQS to result in greater visibility improvements (see Visibility Section, Opportunity 1, page 33). Clearly criteria pollutants do contribute to visibility impairments, but there is already a dedicated regional haze program in the Clean Air Act. In fact, as states complete their SIPs for the second planning period of the Regional Haze program, some states are seeking reductions even when the Class I areas are “below the glidepath” and the contemplated controls are very expensive and result in a very small deci-view improvement. I suggest the following clarification:</p> <p>“The same framework could be used, however, in future reviews of the secondary PM, SO₂, and NO₂ NAAQS to support additional emission reductions in Class I areas where current visibility programs are failing to meet the goals of the Clean Air Act with the worst visibility conditions.”</p> <p>Adding a sentence to the report along these lines would highlight the importance of analysis and RIAs. “A careful assessment, like those done in an RIA, should be used to determine the most cost beneficial policy approach and the relative role of state and Federal governments in addressing outstanding air quality priorities.”</p>	<p>Implemented.</p>
2.11	<p>Second, the report mentions in a couple of places consideration of co-benefits of regulations, which is typically understood as reductions of other pollutants that are not directly regulated pollutants under that controlling section of the Clean Air Act. See NAAQS section (Recommendation 1.2, page 15) and Greenhouse Gas section (Recommendation 6, page 90). The Clean</p>	<p>New text in recommendation #6 in the Climate section reflects this suggestion</p>

	<p>Air Act creates regulatory silos around criteria pollutants and air toxics programs, a flaw that has been identified in other reports to EPA including from this advisory group. (A recommendation for a more integrated regulatory approach is contained in the 2004 NAS Air Quality Management report on <i>Air Quality Management in the US</i> which was reviewed by a CAAAC work group and lead to two reports to the full CAAAC in 2005 and 2007.) However, it is important to look more broadly at the consequences of any specific rule whether it is the co-benefits of a MACT rule on PM emissions or the disbenefits of a MACT rule on GHG emissions. For example, many MACTs set control efficiency limits that can only be met using incineration-based controls. They are very effective at reducing organic HAPs by 90+% but also produce combustion by-products like NOx, contributing to ozone formation – often in NOx limited areas -- and the natural gas to run the controls produces GHGs. In the wood products sector, these controls have increased mills’ carbon footprints. Another example is how a stringent NAAQS may drive fuel choices away from renewable, carbon beneficial biomass to fossil fuels like natural gas even for sources that are meeting new source standards. Thus, the report should acknowledge the importance of considering both co-benefits as well as trade-offs and disbenefits when promulgating new regulations.</p> <p>In NAAQS recommendation 1.2, the work group could add the phrase “or disbenefits” after “the ability to account for co-pollutant effects ...” and again after “...and the potential benefits ...”</p>	
2.12	<p>Page 16 #3: ...s, EPA should require more interstate O3 and PM air pollution reduction from the states than is currently being achieved to further reduce interstate air pollution</p> <p>Page 16 #4: e demonstrations that also accounting for differences in circumstances across the country.</p>	Implemented.
2.13	<p>I did not see anything in the Title 1 section covering Section 113. That may have been a conscious decision on part of the group to just focus on OAR but I think the potential and actual use of section 113 was an integral part of the success of the CAA in achieving the NAAQS and other sections of the</p>	Generalized in introduction.

	Act and deserves some mention in the report. You could probably get some emission reduction estimates under the CAA from OECA.	
2.14	The report should acknowledge the implementation experience gained that points to the need to coordinate with other media programs when implementing the CAA. Examples include scrubbers to reduce air contaminants and the potential need for an NPDES permit for the water discharge, potential impacts on DW supplies, and potential HW disposal issues from the solids.	Outside of scope
2.15	EPA needs to improve the re-designation process once an area gets adequate data to be re-designated. Lengthy delays impact permitting and perhaps new technology along with economic development.	Added a note about this to the “costs” item in the “challenges” part of the “attainment/NAAQS” section.
2.16	The report acknowledges the need to address wildfires and there impact but planned ag burning needs to be included. I am thinking of burning of wheat fields in the northwest and the spring burning of the flint hills in Kansas south of Emporia and Topeka. At least in Kansas those burns have caused violations of the ozone standard in Nebraska and Kansas City and the plume has been seen as far east as Chattanooga. Impact of Agriculture on CAA goals is a sensitive issue and may present a challenge in the future.	Added to “challenges” with brief discussion of the challenge of air quality issues related to the ag sector broadly and cited agricultural burning as one example.
2.17	The report discusses the reduction in NA areas for criteria pollutants but it would be nice if you could show the population in NA areas in say 1990 and how that has gone down to the present day.	While EPA does have a “population exposure report” on its website under the “Greenbook for Nonattainment Areas” section, the data for prior years is not readily available and the population figures currently reflect 2010 population figures. This would be a good suggestion for EPA to add to its annual “Trends” report, however.
2.18	On page 13, under Future Challenges 1, a comment was made “Establishing GHG as a NAAQS to avoid legal challenges over how GHGs should be regulated.”	This did not appear to be a specific request for a change to the Report and there would not have been consensus about this topic. The Work Group declined to make a change based on this comment.
2.19	In Future Challenges, the question was raised whether EPA allows exemptions for wildfires when driven by climate change and whether states should be accountable for nonattainment due to climate change.	The Work Group notes that it addressed the exceptional events policy in the report, which is relevant to this comment.

2.20	Support for the need to reduce uncertainty about timing and finality of NAAQS reviews.	Acknowledged.
3. Mobile Sources		
3.1	<p>As above, the draft gives short shrift to the States- in fact there is no mention of sections 209 or 177 in the report. This is a gross omission. From the very beginning Congress recognized that California had greater experience and background in motor vehicle emissions control, and thus included section 209. The 1990 amendments recognized that other states may have need for more stringent motor vehicle emissions controls, and thus added section 177. There is no doubt that the motor vehicle emissions reductions have been enormous. But there is also no doubt that those reductions would not have been as significant without the programs set forth in California, and adopted by other states pursuant to section 177. In certain cases it was clear that EPA was able to adopt stringent federal standards only because they were previously adopted by California. This shouldn't be seen as a slight to EPA, but rather an opportunity to continue the state federal partnership. Indeed, it was California who initiated action to evaluate and eventually enforce in the case of the Volkswagen defeat devices. It has been said that California, and by extension the 177 states, have been a laboratory for motor vehicle emissions program, and when successfully implemented there, they were applied nationwide.</p>	Added text with regard to CAA sections 209 and 177 and explain that California adopted mobile source emission standards prior to federal standards and retains the ability to receive a waiver of general federal preemption of state mobile source standards.
3.2	<p>Within the Mobile Source recommendations, I have some concerns. Items 1.1 and 1.2 go to the authority of EPA to take various regulatory actions. I believe these are counterproductive, and potentially harmful. Each regulatory action requires an analysis of the authority for that action. Many have been tested in the Courts. A process at this point, after 50 years of precedent and judicial review, would seem to add unproductive regulatory burden, and reopen settled law. It doesn't seem that CAAAC should be telling EPA to go out and do a public process asking about authority.</p> <p>As above, the recommendations should address the importance of states</p>	Included text with regard to CAA section 209 and 177 and mention the programs that have been adopted in California and other CAA section 177 states. Other aspects of this comment can be included in the attached table; have included statement regarding the availability of CAA 209 in allowing states to reduce emissions below federal levels for attainment and climate concerns.

	rights. I don't think it is unreasonable for CAAAC to make an affirmative statement of the benefit of section 209.	
3.3	<p>p. 38, Successes, first sentence: Delete “At a high level of analysis.” Including this phrase implies that with a closer look EPA’s mobile source control programs have not been comprehensive and successful, which is untrue.</p> <p>“At a high level of analysis,” EPA’s programs to control mobile source emissions have been comprehensive and successful.”</p>	Accepted and changed.
3.4	<p>Successes: Add “State and Local Authorities as a Pillar of the Clean Air Act: In 1967, Congress protected states’ rights by specifically preserving California’s authority to regulate emissions from motor vehicles under the waiver provision of Section 209 of the Clean Air Act. It extended these rights in 1977 by allowing other states to adopt California’s motor vehicle emission standards under Section 177. Such authorities are a pillar of the Clean Air Act, allowing states and localities to take the actions necessary to achieve and sustain their clean air, public health and climate goals. When state and local air agencies are allowed to be laboratories of innovation and implement programs that best meet their needs and circumstances, everyone benefits.</p>	Comment was addressed through inclusion of text concerning CAA Section 209(b) and Section 177.
3.5	<p>p. 45, Future Challenges, last two paragraphs of this section and pp. 45-47, Recommendations, #1:” Extent of Clean Air Act Authority and Options Available Under that Authority”</p> <p>I disagree with the premise of the future challenges stated in the last two paragraphs of that section, on p. 45, and oppose the related recommendations, on pp. 45-47, in their entirety. I am not convinced by the argument that these time-consuming exercises will inform stakeholders, industry, and citizens in any useful way or that they will head off uncertainty or litigation. If there is a desire to retain these challenges and recommendations in the report, I request that publication of the report be postponed and a dedicated discussion of them – and those similar to them</p>	The Work Group considered this comment but did not believe that additional discussion or deferring the consideration of adopting the report was warranted.

	in the “Greenhouse Gas Emissions and Climate Change” section – be held among the full CAAAC membership with presentations by, and discussion with, diverse experts.	
3.6	<p>As a state agency regulator, out of all of the regulatory programs at our agency, the vehicle inspection/maintenance program receives the most legislative criticism, by far. There is a continual stream of complaints and potential legislative proposals to drop the program. How does this relate to the report? Although our contact at the U.S. EPA Regional Office is helpful and responsive to our questions, U.S. EPA can be more supportive of the program in providing clear, concise information on the benefits of the program. If as a result of newer, cleaner vehicles in combination to having only OBD testing the program is no longer providing significant emissions benefits, then U.S. EPA should allow programs to be discontinued.</p> <p>I would suggest that added to the recommendation portion of the report on mobile sources that U.S. EPA provide additional technical support to agencies running vehicle inspection/maintenance programs that quantify assist in the quantification of emission reductions and other benefits of the program.</p>	Additional text has been added with regard to I/M programs (see pages 43 and 47)
3.7	On page 38 under phase out of lead the first sentence needs to be reworded	Accepted and changed
3.8	I was surprised though, that in discussing air “pollution,” in general, the author of the section did mentioned the achievement in air lead concentration but did not emphasis the apparent health advantages of that effort, the dramatic drop in the geometric mean blood lead level in children. It is of a historical interest, that the move to unleaded gasoline was not actually in an attempt to decrease blood lead levels in children, but to protect the catalytic convertors.	<p>This is mentioned in the paragraph immediately below the chart that cites 98% reduction in children blood levels and estimated health benefits.</p> <p>It is also accurate, as stated, that at least part of the motivation for reduced lead levels was to avoid catalyst poisoning. But there is scholarship also citing awareness of the negative human health effects of lead as being a factor. See The U.S. Experience with the Phasedown of</p>

		Lead in Gasoline, Resources for the Future, June 2003, citing studies in late 1970s.
3.9	<p>As to the discussion regarding altering the fuel consumption in mobile sources, and the move to electrification, I am a little disillusioned by the lack of significant interest in plug in hybrid technology in the near future and the rush to all electric. There is a significant fear among the public, myself included, about range. If the nation was to move more to the combination of smaller, more efficient internal combustion engines coupled to electric drive, it would be a way to avoid that fear. In some communities, in which individuals generally do not drive very far at any time and with adequate charging facilities, the vehicle could function almost exclusively on electric power. At the same time, the gasoline powered engine could be a stop gap for the time when a greater range is needed. I drive a plug in hybrid myself. Most of my current driving is under 25 miles, the current range for my car's charge. I am comfortable though, to push that envelop, since I have the back up gas powered engine. I occasionally do exceed the 25 miles, but I "average" over 100 miles per gallon of gasoline. I just read today, that the current white house is pushing for an aggressive more to enhanced fuel economy by 2023, I supposed aimed at getting that enforceable before the next election. That has a mixed implication, since it may make the standard part of the political football for that election.</p>	<p>The Work Group appreciates the comment; the section was not intended to indicate that EVs are or are not the only solution. Recommendation 1.3 indicates that EPA should develop the necessary analytical structure to assess the relative impact of different vehicle types regarding generation of GHGs and specifically asks how EPA can avoid picking technological "winners and losers."</p>
4. Environmental Justice		
4.1	<p>pp. 66-67, Recommendations, #1: "Incorporate EJ more extensively and transparently into key risk assessment analyses"</p> <p>To these recommendations I would add that if an EJ analysis were to replace NATA, potentially via EJ Screen, the level of detail and supporting analysis that NATA provides should be integrated into the tool in a way that is accessible and useful to EPA's state and local co-regulators</p>	Implemented.
4.2	<p>The discussion regarding mercury does discuss reduced exposure to dietary mercury, but does not show any health effects from such. This sort of secondary positive effect should be emphasized, think of the lowering of stack emissions of mercury and the coincidental drop in PM2.5 etc., and</p>	Additional health information not addressed in response to this comment.

	perhaps lowering of risk of asthma in some communities in which the mercury and particulate concentrations did drop	
5. Greenhouse Gas Emissions and Climate Change		
5.1	<p>pp. 84-87, Recommendations, #1: "EPA Should Reassess and Further Define its CAA Authority to Address GHGs and Climate Change"</p> <p>See the comment above, on Mobile Sources Recommendation #1: I disagree with the premise of the future challenges stated in the last two paragraphs of that section, on p. 45, and oppose the related recommendations, on pp. 45-47, in their entirety. I am not convinced by the argument that these time-consuming exercises will inform stakeholders, industry, and citizens in any useful way or that they will head off uncertainty or litigation. If there is a desire to retain these challenges and recommendations in the report, I request that publication of the report be postponed and a dedicated discussion of them – and those similar to them in the "Greenhouse Gas Emissions and Climate Change" section – be held among the full CAAAC membership with presentations by, and discussion with, diverse experts.</p>	Appreciate that views among CAAAC members will differ on these issues, but disagree that the report should be postponed. Different perspectives regarding the challenge of climate change and availability of legal authority have been presented in the report.
5.2	<p>In GHG recommendation 6, the work group could add a short second sentence. "In addition, EPA should explicitly address any GHG disbenefits from setting NAAQS or establishing air toxic regulations." (for more explanation about this comment see comment 2.11 in NAAQS section)</p>	New text added to recommendation #6 based on this suggestion.
5.3	<p>I have focused my review and comments on the GHG section of the report given its importance to EPA's current mission. Recognizing the need for prompt and significant EPA action on climate change/GHG emission reductions, my edits address those portions of the draft report that, while well intentioned, could inadvertently delay, complicate or cripple EPA action. For example, suggesting that EPA conduct a fresh comprehensive review of its legal authority could be misread to suggest that CAAAC believes that any further EPA action on GHGs must await the conclusion of such an effort. Clearly, that cannot be the intention of the Committee. I have suggested language that would acknowledge the value of such a review but recommend that it be conducted in ongoing fashion so as not to</p>	The overarching comments were addressed in the context of the specific edits provided.

	<p>delay important near-term action. I have also corrected a couple of out of date citations where referenced authors later (i.e., following the cited reports) changed their interpretation of the viability of section 115 after further analysis. And I have added some important considerations related to section 115 that the previous draft did not address.</p>	
5.4	<p>Future Challenges 1. <i>Extent and limits of CAA Authority</i> - While this section introduces agency inquiries that are intellectually appealing, there is a not insignificant risk that, in the effort to produce the “perfect” legal authority analysis, EPA would be paralyzed and crippled in executing some of its highest-priority obligations. I support the idea of EPA undertaking an <i>ongoing</i> analysis of its authority, but this should be done dynamically as events and opportunities unfold and not statically nor in a manner uninformed by the context of a particular rulemaking or other action. I would much prefer to see the Committee urge EPA to update its authority and tools analyses <i>as it moves ahead</i> – as it must if it is to meet its statutory obligations.</p>	<p>Edits were made to section 1 to address some of the concerns expressed. In general, the recommended analysis of legal authority is not intended to delay progress, but rather better serve to clarify EPA’s existing authority. As the report points out, addressing legal authority questions in the context of ongoing, serial rulemakings has not been an unmitigated success.</p>
5.5	<p>Future Challenges 1. <i>Extent and limits of CAA Authority</i></p> <p>...</p> <p>But while EPA has promulgated regulations – and in some cases multiple regulations – under these CAA authorities, <u>some significant potential sources or aspects of the full extent of EPA’s authority to regulate sources of GHG emissions under the CAA are currently untested, unknown, as well as potential gaps in that authority.</u> For example, with regard to mobile sources, EPA has either chosen or is restrained by the Act to promulgate standards in increments of several Model Years.¹⁷⁷ In addition, where exertion of CAA authority requires technical assessments and/or consideration of feasibility or costs, there may be practical limits <u>that the agency has not yet reached regarding</u> how expansive <u>are the standards that</u> may be promulgated. Other <u>open</u> issues occur with respect to the form that CAA standards may take, including the extent of compliance flexibility that may be allowed under various provisions. Opinions differ on these issues, but the extent of</p>	<p>As per above, editing of text in this section has been done, with some changes to the precise edits suggested.</p>

	<p>CAA authority to control GHGs is largely a matter of legal analysis and the caselaw that has been generated to date. No single regulatory provision of the CAA was enacted to control GHGs, such as title IV of the CAA enacted to address acid rain from the EGU sector.</p> <p>At the same time, an increasing body of scientific evidence points toward multiple effects emanating from climate change, including extreme weather conditions. These effects, indeed, could complicate efforts to address climate change. But while EPA received multiple petitions to regulate GHGs under other provisions of the CAA, the Agency has not thoroughly analyzed the full potential extent of its CAA authority to regulate GHGs under the Act, at least in a public fashion, since the 2008 ANPRM. Nor has the Agency expressed a coherent view with regard to how different measures might be integrated to reduce GHGs, or the potential limits of authority.</p> <p>In some respects, this is not surprising. During the rulemaking process, EPA rarely describes the limits of its authority, but rather analyzes whether it has sufficient authority to promulgate the rule in question. But this also means that it is not possible to know, with precision, whether the CAA is capable of reducing U.S. GHG emissions to zero or to some value above zero.¹⁷⁸</p>	
5.6	<p><u>1.3. CAA §115 International Air Pollution</u></p> <p>A significant amount of attention has been devoted to the consideration of whether CAA §115 could provide authority for EPA to regulate GHGs in an “economy-wide” program, potentially in conjunction with the Paris Agreement or other international measures to address climate change. CAA §115 actually predates the 1970 Clean Air Act and has been amended since its original enactment.¹ I, but in its current form, <u>it provides that</u></p>	Edits made to this section in response to the comments. Updates made with regard to cited work.

¹ See *Combating Climate Change With Section 115 Of The Clean Air Act, Law and Policy Rationales*, Michael Burger ed. (Edward Elgar Publishing, 2020) (online summary available at

“[w]henever the Administrator [based on information] has reason to believe that any air pollutant or pollutants emitted in the United States cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country . . . the Administrator shall give formal notification thereof to the Governor of the State in which such emissions originate.” This notice, in turn, “shall be deemed” to be a finding under CAA section 110 requiring a state to revise its applicable state implementation plan. CAA §115 contains a “caveat” however, that the section is only to apply to a foreign country that has “given the United States essentially the same rights with respect to the prevention or control of air pollution occurring in that country as is given that country by [section 115].” This last provision is typically referred to as the reciprocity provision.

It has been argued that the legislative history of this provision supports its use to address climate change because both the then-current President and Members of Congress described carbon dioxide as “an air pollutant” when the provision was enacted² under the CAA⁴⁹²-and that the specific language in the provision requiring a reciprocity determination can be met with respect to the 195 signatory countries of the UNFCC or a smaller subset through international negotiations.³⁴⁹³ It has also been argued that EPA could use despite the provision’s focus on state implementation plans to; EPA could promulgate a national GHG emissions target and thereafter allocate to each state their respective “share” of the emissions reductions necessary to address that are creating the endangerment while preserving

https://climate.law.columbia.edu/sites/default/files/content/Combating%20Climate%20Change%20With%20Section%20115_Summary.2020_0.pdf.

² *Id.* at Chapter 2: The Legislative History of Section 115, Philip Barnett (online version available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3578177).

³ *Id.* at Chapter 3: Substantive Reciprocity, Ann Carlson.

reciprocity.⁴⁴⁹⁴ Further, it is argued that these state plans could use cost-saving market-based mechanisms and be effectively ~~be~~ backstopped by federal implementation plans if necessary.⁵⁴⁹⁵

This interpretation of §115 has legal risks not unlike other ambitious uses of the CAA~~is not without dispute~~. The Supreme Court has interpreted the phrase “any air pollutant” as applying to GHGs in one case (*Massachusetts v. EPA*) and as excluding GHGs in another (*Utility Air Regulatory Group v. EPA*),⁶ so courts would have to determine which precedent to follow. Proponents assert that three factors should incline courts to follow *Massachusetts v. EPA*: (1) the virtually identical language used in §115; (2) the lack of any of the “catastrophic consequences” that the Court relied on in *Utility Air Resources Group* as justification for its holding; and (3) the unique legislative history of §115.⁷ Courts would also have to determine whether using §115 to curb GHGs violates the “elephant in a mousehole” doctrine, which says Congress does not hide major policies in minor provisions, or whether §115, the Act’s “international air pollution” provision, represents what the Supreme Court recently called a “watering hole – exactly the sort of place we would expect to find this

⁴ *Id.* at Chapter 11: The Section 115 SIP Call, Philip Barnett and Alexandra Teitz (online version available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3578181), and Chapter 12: Implementing Section 115 Through the SIP Revision Process, Jared Snyder and Jessica Wentz (online version available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3569898).

⁵ *Id.*

⁶ *Massachusetts v. EPA*, 549 U.S. 497 (2007); *Utility Air Regulatory Group v. EPA*, 573 U.S. 302 (2014).

⁷ Summary: Combating Climate Change with Section 115 of the Clean Air Act, Institute for Policy Integrity at the New York University School of Law, Sabin Center for Climate Change Law at Columbia Law School, and Emmett Institute on Climate Change and the Environment at UCLA School of Law, Section 5: The Meaning of “Any Air Pollutant,” (online at https://climate.law.columbia.edu/sites/default/files/content/Combating%20Climate%20Change%20With%20Section%20115_Summary.2020_0.pdf).

	<p>elephant.”⁸Some have argued that other provisions of the CAA are constrained to address emissions within the United States and that CAA 115 cannot be read to allow EPA to take whatever actions are necessary to address widespread air pollution outside of the country, but rather is limited to cross border endangerment.¹⁹⁶ Other arguments have note that Congress would not have conveyed broad authority to EPA to regulate greenhouse gas air pollutants within CAA 115, noting the oft quoted phrase that Congress . . . does not . . . hide elephants in mouseholes.”¹⁹⁷ ⁹Finally, questions have been raised with respect to how EPA would ensure that any required SIP revisions would be in accordance with the limitation in §115 that the section only applies to a foreign country which provides reciprocal rights. <u>According to proponents, reciprocity can be achieved if U.S. diplomats negotiate international agreements that ensure that the U.S. GHG reductions required under §115 are matched by comparable efforts in other major emitting nations.</u></p>	
5.7	<p><u>1.4. CAA §615 Authority of the Administrator (Title VI)</u></p> <p>...</p> <p>EPA has previously described 615 as “intended to augment other authorities and responsibilities established by Title VI.”²⁰¹ In 2008, EPA also noted that it would need to “assess and analyze the available scientific information on the effect of GHGs on the stratosphere.”²⁰² But at the same time, the</p>	Incorporated edit

⁸ Further, proponents note that Congress enacted §115 at a time (i.e., 1965) when all of its provisions were enabling, not highly prescriptive, in nature. The brevity and open nature of the language is also highly consistent with the character of and context for the authority – i.e., enabling the Executive to act in a manner consistent with the nation’s diplomatic and trade interests.

⁹ [ORIGINAL FOOTNOTES 196 (re Bookbinder/Niskanen Center) and 197 (re Richardson) are **deleted** because they refer to outdated positions and thus mischaracterize those sources’ current positions on the viability of §115. See, e.g., <https://www.niskanencenter.org/coals-nightmare/> (arguing in a later blog post than the one cited that the Supreme Court would uphold EPA use of 115) and <https://media.rff.org/archive/files/document/file/RFF-DP-16-41.pdf> (noting that 115’s promise makes it worth pursuing but with caution, characterizing the legal risk as “similar in magnitude to those associated with the Clean Power Plan.”).]

	<p>Agency described the regulatory authority conveyed by the section as broad, potentially including the ability to establish a “cap-and-trade” program.²⁰³ Given the relatively nascent state of EPA’s utilization of/reference to CAA §615, however, relatively less academic and analytical attention has been paid to this authority. Some have noted that “[a]ttempting to create<u>promulgate</u> a broad regulatory program <u>based on such sparse language relying on CAA § 615</u> “is relatively unlikely to survive legal challenge” on the same basis as critiques of the Agency’s CAA §115 authority.²⁰⁴</p>	
5.8	<p>Recommendations</p> <p>...</p> <p>... Therefore, the first recommendation is that EPA <u>continue in ongoing fashion to conduct a new, update and solicit</u> public review of its CAA authority to address GHGs based on its experience over the last decade and <u>to solicit</u>ing additional public opinion on the most productive approach for the Agency to take in the coming decade. At minimum, this review should include the CAA authorities identified above in section 1 of “Challenges.”</p> <p><u>1.1. EPA Should Issue a New ANPRM or Similar Public Document Analyzing Available CAA Authority to Address GHGs Under the CAA and Soliciting Public Comment.</u></p> <p><u>1.1.1. EPA Should Reexamine Authority Pursuant to CAA 108, 109, 111, 112, 115, 615.</u></p> <p>On January 19, 2021, EPA denied three long-filed petitions to the Agency requesting that EPA regulate GHGs pursuant to its authority to set NAAQS under CAA §§108 and 109,²¹⁴ to address GHGs pursuant to pursuant to CAA §115 and to regulate GHGs as a hazardous air pollutant under CAA §112. On March 4, 2021, EPA in a short notice indicated that it was withdrawing these determinations. <u>The agency has yet to</u>Both efforts are woefully insufficient</p>	<p>Addressed some line edits, incorporated additional reference material provided, but did not incorporate the broader suggested strikeouts.</p>

to fully address the challenge of climate change and the serious issues that underlie EPA's legal authority to address GHGs under the CAA.

With respect to the January 19, 2021 determination, much of the analysis of the petitions is frankly cursory and based on a mix of legal and policy arguments. Significant portions of the determination also rely on comments filed by other agencies in connection with EPA's July 2008 ANPRM, which were notably not views that were fully analyzed nor adopted by the Agency.²¹⁵ Thus, the analysis underlying the denial is not only 13 years old, it also does not reflect the full breath of EPA's analysis of its available authority in the multiple rulemakings it has undertaken since *Massachusetts*. With regard to EPA's withdrawal of the denial of the petitions addressed in the January 19, 2021 determination, the Agency's response ~~simply does not address the underlying issues is even more severely limited~~. EPA indicated only that the "agency did not fully and fairly address issues raised by the petition."²¹⁶ But EPA gives no indication of what specific information gaps exist ~~nor how it specifically considered the process by which the initial determination by the Agency was made to be "unfair."~~ ~~The Agency gave no hint as to what procedural defects were the source of the unfairness,~~ nor what issues may have been addressed and what issues not.

Given the enormity of the issue – and the importance to many sectors of the economy and many members of the public as to how EPA will seek to address on climate change, the Agency should undertake some form of public review of its most promising avenues for future action on climate change. This review should include an assessment of relative legal risks and strengths. ~~not leave core legal issues—in some cases raised with the Agency over 20 years ago²¹⁷—unaddressed or addressed in a piecemeal fashion. Rather, the EPA should undertake a new review, in a public fashion, of the extent of its authority under the CAA to address GHGs. Whether this takes the specific form of an ANPRM or not is not the important issue. The issue is that CAA authority in the area of GHGs and climate change should be fully expressed, even where such analysis may reveal limits to that authority. The~~

present uncertainty over the extent of that authority, how and when EPA may or may not utilize different authorities and how the Agency may address issues concerning smaller sources and/or de minimis emissions have either not been fully vetted nor fully expressed by EPA under several past Administrations, despite Supreme Court decisions affirming both the Agency's authority to regulate GHGs as "air pollutants" and interpretation that this authority is context-specific.²⁴⁸

CAAAC would understand that this may be contrary to long-standing practice, that the Agency rarely if ever describes the limits of its potential legal authority. But both the extent and the limits to CAA authority are vital to a full understanding of what actions may or may not be taken and what additional legal authority may or may not be needed by EPA or other parts of the government. In essence, there is no longer any benefit to the Agency or the public in keeping one's powder dry on important legal issues affecting climate.

In connection ~~with~~^{ef} this review of EPA's most promising legal authority under different provisions of the CAA, the Agency should also detail and examine relevant policy issues. For example, with regard to a GHG NAAQS, it should explore how the "cooperative federalism" structure of the Act would be implemented ~~should be explored~~. Fundamentally, whether or not a primary or secondary NAAQS is utilized, responsibility for planning how to achieve attainment is relegated to the states. Thus, questions of adequate resources, planning tools and the ability to undertake different approaches to develop acceptable SIPs must be examined. With regard to section 115, EPA should consider the use of a model rule, similar to ones it has successfully deployed under the Act's "good neighbor" provision, to simplify state implementation and to promote uniformity.¹⁰~~EPA does not avoid~~

¹⁰ *Combating Climate Change With Section 115 Of The Clean Air Act, Law and Policy Rationales*, Michael Burger ed. (Edward Elgar Publishing, 2020), Chapter 11: The Section 115 SIP Call, Philip Barnett and Alexandra Teitz (online version available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3578181), and Chapter 12: Implementing Section 115 Through the SIP Revision Process, Jared Snyder and Jessica Wentz (online version available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3569898).

	<p>these issues if it attempted to utilize CAA §115. Similar findings of SIP inadequacy would be triggered and perhaps complicated by provisions providing for the participation of foreign countries at public hearings concerning “any revision of the appropriate portion of the applicable implementation plan.”²⁴⁹</p> <p>¹ <i>Combating Climate Change With Section 115 Of The Clean Air Act, Law and Policy Rationales</i>, Michael Burger ed. (Edward Elgar Publishing, 2020), Chapter 11: The Section 115 SIP Call, Philip Barnett and Alexandra Teitz (online version available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3578181), and Chapter 12: Implementing Section 115 Through the SIP Revision Process, Jared Snyder and Jessica Wentz (online version available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3569898).</p>	
6. Stationary Sources		
6.1	<p>(This comment also noted above in NAAQS Section)</p> <p>Second, the report mentions in a couple of places consideration of co-benefits of regulations, which is typically understood as reductions of other pollutants that are not directly regulated pollutants under that controlling section of the Clean Air Act. See NAAQS section (Recommendation 1.2, page 15) and Greenhouse Gas section (Recommendation 6, page 90). The Clean Air Act creates regulatory silos around criteria pollutants and air toxics programs, a flaw that has been identified in other reports to EPA including from this advisory group.⁴ However, it is important to look more broadly at the consequences of any specific rule whether it is the co-benefits of a MACT rule on PM emissions or the disbenefits of a MACT rule on GHG emissions. For example, many MACTs set control efficiency limits that can only be met using incineration-based controls. They are very effective at reducing organic HAPs by 90+% but also produce combustion by-products like NO_x, contributing to ozone formation – often in NO_x limited areas -- and the natural gas to run the controls produces GHGs. In the wood products sector, these controls have increased mills’ carbon footprints. Another example is how a stringent NAAQS may drive fuel choices away</p>	<p>Added language to the challenges and opportunities section of the Section 112 chapter to address the challenges that EPA faces in this area.</p>

	from renewable, carbon beneficial biomass to fossil fuels like natural gas even for sources that are meeting new source standards. Thus, the report should acknowledge the importance of considering both co-benefits as well as trade-offs and disbenefits when promulgating new regulations. ⁵⁶	
6.2	Request to add “tribal” at several points.	Implemented.
6.3	Comment that federalism is a political term.	Cooperative Federalism is used by most courts that describe the structure of the Clean Air Act. It means an approach in which EPA there is federal oversight but decisionmaking is generally focused at the state/local/tribal level.
6.4	On the recommendation 2.4 to work to improve processing time for permit modifications, the comment was made that it should not shorten public comment periods.	No change was made to the report because the statute sets the mandatory minimum public comment periods, so EPA could not truncate these.
7. Indoor Air		
7.1	I understand the purpose of the report is to provide recommendations to EPA on the further implementation of the Clean Air Act and not to provide legislative suggestions. While I appreciate the concerns expressed in the section on Indoor Air and wanting to look at pollutant exposures broadly, the recommendations seem beyond the authority of the current Clean Air Act and suggest actions by other Federal Departments besides EPA, where my expertise is more limited. While I am not objecting to this being included, if we venture beyond the framework of the Clean Air Act, we would end up with a report that addresses numerous potential legislative changes as offered by various CAAAC members.	CAAAC appreciates the comment and attempts to acknowledge scope of charge in introduction and conclusion. Text added to introduction.
7.2	From today’s CAAAC meeting: I liked your section on Indoor Air, but frankly I think you underplayed it. I would like to see some strengthening. In the original CAA of 1970 and its UK predecessor the paradigm was that the critical contaminants were from combustion sources released into ambient air. 50 years later human exposure is dominated by indoor air quality. The CAA only means anything if it impacts Indoor Air. That need to be strengthened.	Several edits included to address comments.

	<p>Some of the contaminants of concern are in the criteria pollutants (e.g. PM, O3, NO2) others (e.g. formaldehyde, acrolein) are HAPs. Some contaminants, PM in particular, are especially problematic having both significant indoor and outdoor sources.</p> <p>EPA could be very useful by establishing IAQ limits, but it has to go beyond the traditional approach of a contaminant-by-contaminant approach. That might make sense for occupational safety where there is a fixed and known contaminant of concern causing the preponderance of harm. In the indoor environment the harm will be from a summation of the things like PM, formaldehyde etc. EPA needs to conduct or fund this kind of research.</p> <p>A key difference to this approach is that the action happens more on the destination end (i.e. buildings) than from identifiable sources. That requires a bit of a different approach. So I think that “collaborating” with the industry/profession is a bit too weak. EPA must also <i>enable</i> them by conducting/funding research that facilitates improvements in standards and practices. A recent example: ASHRAE standards are looking at requiring treatment of outdoor air when it exceeds AAQS, most importantly for ozone and PM. The EPA-approved measurement approaches are meant for regional monitoring stations and are not at all appropriate for a building control system—especially for a residential system. That represents a significant barrier to adopting provisions that would advance the purposes of the Act.</p> <p>There is also an EJ link with Indoor Air you could make. Low income and similar communities live in poorer quality homes and thus have a tougher time getting good IAQ. There are various federal programs (e.g. DOE Weatherization Assistance Program) that attempt to address some of these communities, but they don’t have much of an indoor air emphasis.</p>	
8. Regional Haze		
8.1	Page 30—should this citation be (42 U.S.C. §749279)? And should add “National Park” to “Grand Canyon”	Corrected this and citation in initial paragraph and made other requested changes.

	<p>Page 30--States were required to submit their initial plans between 2006 and 2008 and were required to submit reports</p> <p>Page 33 #4--The Regional Haze program rules allow states to determine</p> <p>Page 33 #4--In this situation, when current plans are sufficient or exceed visibility requirements, a significant amount of resources are being used by states to prepare and submit SIP revisions, and by EPA to review these SIP re</p>	
8.2	In the visibility section there is a table showing national park visitors in 2020 which may be misleading since that was the COVID year. Perhaps use 2019 visits or an average of 2018/2019/&2020. The table showed 33 million visitors too Rocky Mountain National Park and a much lower number to Great Smokey Mountains. I always thought Smokey Mountains was the most visited or at least close to it because of its location on the east coast.	Typo – has been corrected to 3.3 million visitors.
8.3	(paragraph 1) There are “158” Federally mandated Class I areas, of which, 156 have adopted thresholds for visibility impairment.	Updated.
8.4	(regarding accomplishment #4): Add something that extends the importance of visibility to preserving sites and landscapes as they once were.	A note along these lines was added to the “challenges” section (i.e., the challenge of achieving this goal).
8.5	(regarding challenge #4): “states to determine” and “resources are being used”	Corrected
8.6	(regarding recommendation #2): I support this and understand that Don Shepard, FLM with the National Park Service in Denver, has compiled something similar to this already.	The workgroup appreciates this note and encourages the commenter to work with EPA and the NPS to make sure that EPA has a copy of this analysis and reviews it. This could be an easy follow-up with the CAAAC if a report already exists from another agency.
9. Acid Rain		
9.1	Page 98--EPA Should Support Science that Serves Vital Role i	Corrected in redline.
10. General/Conclusion		

10.1	I was surprised when I first joined CAAAC, I was surprised that I was the only physician seated on the committee. It seemed odd to me that for a committee which advised a governmental agency charged with developing health-related guidelines, that there was no other physician present. One recommendation I would make is that physicians be actively recruited to serve on the advisory council. Preferable more than one and consisting of physicians in the specialties of both Pediatrics as well as Obstetrics and Gynecology.	Out of scope of the charge.
10.2	Since the emphasis has been to develop health-based regulations, I expected to see more emphasis on that in both the narrative as well as the suggestions for the future.	Additional language added in conclusion section.
10.3	My last comment about the report, is the lack of any discussion about the lack of training of specialist in the health effects of air pollution. By that I mean the teaching of medical students and physicians as well as other medical professionals and the development of the field of environmental medicine. As a member of the executive council of the American Academy of Pediatrics' Council on Environmental Health and Climate Change, we do see an interest in the subject, but it needs support, moral and financial, if it is to develop. If health-related standards are truly to be developed and implemented, there has to be some structure for clinical use of information, and clinical research in the field. EPA should partner with the American Academy of Pediatrics and the American Board of Pediatrics and develop a mutually beneficial relationship that will benefit the physicians in the field and the regulators at EPA. This could start through the existing Pediatric Environmental Health Specialty Units and then branch out to be more inclusive in standard pediatric training programs. This would serve several purposes, not the least developing a group of pro-environmental practitioners. Studies show that the public tend to prefer the advice and information provided by their own practitioners to other sources. With a trained group of individuals, the EPA could reach farther into the community education field.	Out of scope of the charge.

