UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

OFFICE OF THE ADMINISTRATOR
SCIENCE ADVISORY BOARD

June 21, 2018

EPA-SAB-18-002

The Honorable E. Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Subject: Science Advisory Board (SAB) Consideration of EPA Planned Actions in the Fall 2017 Unified Agenda of Regulatory and Deregulatory Actions and their Supporting Science

Dear Administrator Pruitt:

As part of its statutory duties, the EPA's Science Advisory Board recently concluded discussions about possible review of the science supporting major EPA planned actions associated with the Fall 2017 Unified Agenda of Regulatory and Deregulatory Actions. The EPA Office of Policy provided notice of the release of this information on December 14, 2017. During its public meeting on May 31, 2018, the SAB discussed whether to review any of the planned regulatory and deregulatory actions in order to provide advice and comment on the adequacy of the scientific and technical basis underlying each, as authorized by section (c) of the Environmental Research, Development and Demonstration Authorization Act.

The SAB focused its attention on nine major planned actions identified by the EPA Office of Policy and published in the *Federal Register*. The SAB convened a Work Group to review the planned actions, conduct fact-finding, and develop recommendations for further consideration by the chartered SAB[1]. At the public meeting, the SAB discussed the Work Group's findings and decided to undertake review of the science supporting two of the actions in the semi-annual Regulatory and Deregulatory Agenda at this time. The SAB also identified one action for which insufficient information was available and deferred a determination until such information is available.

[1] Memorandum: Preparations for Chartered Science Advisory Board (SAB) Discussions of EPA Planned Agency Actions and their Supporting Science in the Fall 2017 Regulatory Agenda https://yosemite.epa.gov/sab/sabproduct.nsf//9263940BB05B89A885258291006AC017/$File/WG_Memo_Fall17_RegRevAttsABC.pdf

The SAB notes that three of the nine major planned actions are listed as long-term actions and another three are listed as Pre-Rule Stage actions. The Office of Management and Budget defines long-term actions as planned actions "under development but for which the agency does not expect to have a regulatory action within the 12 months after publication of this edition of the Unified Agenda" and notes that some long-term actions may only have abbreviated information. OMB defines the Pre-Rule Stage as "actions agencies will undertake to determine whether or how to initiate rulemaking. Such actions occur prior to a Notice of Proposed Rulemaking (NPRM) and may include Advance Notices of Proposed Rulemaking (ANPRMs) and reviews of existing regulations." The SAB considered these early stages of rulemaking for the planned actions to facilitate planning and interaction with the Agency and notes that the Board has the option to defer a decision on whether planned actions merit further review until sufficient information is available.

**EPA Planned Actions that Merit SAB Review**

*Reconsideration of Final Determination: Mid Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light Duty Vehicles (RIN 2060-AT77)*: The SAB finds this action merits further review. The SAB Work Group submitted fact-finding questions regarding the types of analyses that may be used to support the action. The EPA responded that the analyses "could be considered to inform the forthcoming NPRM" and that they would assess these issues as they develop the proposed rule. The EPA also responded that the schedule for the rulemaking addressing model years 2022-2025 light-duty vehicle greenhouse gas (GHG) standards has not yet been announced. The SAB notes that EPA, in collaboration with the National Highway Traffic Safety Administration (NHTSA) and the California Air Resources Board (CARB), developed extensive documentation for the mid-term evaluation (MTE), including a technical assessment report and several supporting studies. NHTSA is conducting an MTE and Regulatory Impact Analysis (RIA) regarding fuel economy standards to inform a companion rule to the EPA standards. Key questions that merit an SAB review could include but need not be limited to the following:

- What are the barriers (e.g., price, foregone power or safety) to consumer acceptance of redesigned or advanced technology vehicles, and how might such barriers be overcome?
- Would or could there be a significant "rebound" effect from the deployment of new fuel efficient (and lower GHG-emitting) vehicles, and how might such an effect be mitigated?
- Would requirements for more fuel efficient new vehicles lead to longer retention of older less fuel-efficient vehicles and, if so, would this significantly affect projected emission reductions and have effects on crash-related safety?
- What proportion of vehicle electrification, particularly for plug-in vehicles including plug-in hybrid electric vehicle (PHEV) and battery electric vehicles (BEVs), would be needed to achieve fleet average GHG emission reductions?
- What are the effects, co-benefits or harms in terms of emissions reductions or increases for other pollutants, and costs benefits of technology options?
- What are the projected fleet level GHG emissions and co-pollutant emission changes associated with various scenarios?

Such a review might begin with existing documents developed by EPA, NHTSA and CARB during the MTE process, such as the Draft Technical Assessment Report. To the extent that the agencies have appropriately addressed key issues such as those above with adequate peer review, the scope of SAB review could be narrowed or redirected. A detailed rationale is provided in the Work Group Memorandum [2] and the fact-finding is summarized in Attachment C of that document.

*Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits (RIN 2060-AT79)*: The SAB finds that this action merits review regarding the adequacy of the supporting science. In response to fact-finding questions submitted by the SAB Work Group, the EPA stated that there is "uncertainty about what scientific work, if any, would support" this action, did not describe the approach being taken to develop the needed science, and did not identify any peer review plans. The SAB finds issues, such as: i) determining whether glider vehicles have operational and life cycle emissions less than, comparable to, or greater than new vehicles; ii) answering technical questions regarding the impact of emissions from glider vehicles; and iii) identifying and applying suitable methodologies for assessing the effect of the proposed rule on emissions, air quality and public health, are scientific and technical in nature.

Key questions that merit SAB review could include but need not be limited to the following:

- What are the emission rates of glider trucks for GHGs, nitrogen oxides, particulate matter, and other pollutants of concern? What are the key sources of variability and uncertainty in these rates?
- How do these emission rates compare to those of conventionally manufactured trucks that are: (a) new; and (b) used at prices comparable to the purchase price of a "new" glider truck? What are key sources of variability and uncertainty in the comparisons?
- What is the range of possible market penetration of glider trucks into the on road heavy duty vehicle stock? What is the effect of glider truck penetration into the market on fleet level emissions at national, regional, and local scales in the near-term and long-term, compared to the status quo?
- What are implications of changes in emissions in the near-term and long-term from the penetration of glider trucks regarding GHG emissions, air quality, air quality attainment, and human health, compared to the status quo?

Such a review might begin with existing documents developed by EPA, such as the November 20, 2017 test report in which emissions of gliders and conventionally manufactured trucks were compared, and focus on areas where updates are needed. To the extent that EPA appropriately addresses key issues such as those outlined above with adequate peer review, the scope of SAB review could be narrowed or redirected. A detailed rationale is provided in the Work Group Memorandum[3] and the fact-finding effort is summarized in Attachment C of that document.

[2] Ibid.
[3] Ibid.

**EPA Planned Actions Awaiting Further Information for SAB Review**

*Increasing Consistency, Reliability, and Transparency in the Rulemaking Process (RIN 2010-AA12)*: The SAB finds that a review of the scientific and technical basis for this planned action should be deferred until more information is available and, at that time, determine if it is appropriate to provide advice and comment. From the information provided by EPA staff and the pre-rule stage status of the action, the SAB finds that there is not enough information to recommend a review of the underlying science at this time. The EPA indicated that this action would not involve basic economic methodology changes. However, given the concern for consistency, such changes may well have to be considered. Depending upon how the action proceeds and the comments on the ANPRM, it may ultimately involve precedential issues and become an influential scientific or technical work product. The SAB also notes that some of the issues presented by the Work Group regarding RIAs may be appropriate for inclusion in this planned action and review by the SAB (see RIN 2060-AT67).

**EPA Planned Actions Not Meriting Further SAB Review**

*State Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units (RIN 2060-AT67)*: This planned action does not merit review by the SAB. While the SAB does not wish to provide advice on this planned action, it does find several aspects of the underlying "Regulatory Impact Analysis for the Review of the Clean Power Plan: Proposal" (RIA) dated October 2017 to be appropriate for an advisory activity by the Board. Specifically, the RIA makes assumptions that warrant further review, as follows: i) sensitivity analysis assumptions about mortality associated with particulate matter at concentrations below the current NAAQS; ii) calculations of climate change benefits on a US-only basis rather than a global scale; and iii) application of a 7% discount rate to estimate foregone GHG mitigation benefits which extend across multiple generations. These aspects may be appropriately considered under the planned action, *Increasing Consistency, Reliability, and Transparency in the Rulemaking Process* (RIN 2010-AA12) as noted above.

*Review of the Primary National Ambient Air Quality Standards for Sulfur Oxides (RIN 2060-AT68)* and *Review of the Secondary National Ambient Air Quality Standards for Ecological Effects of Oxides of Nitrogen, Oxides of Sulfur and Particulate Matter. (RIN 2060-AS35)*: These actions do not merit further SAB consideration. These actions undergo a multi-year detailed review process by the EPA Clean Air Scientific Advisory Committee (CASAC) and its panels. CASAC is a federal advisory committee and has a statutory mandate under the Clean Air Act to advise the Administrator regarding the National Ambient Air Quality Standards (NAAQS). The Sulfur Oxides Review Panel and the Secondary NAAQS Review Panel for Oxides of Nitrogen and Sulfur were specifically constituted, in terms of independent scientific expertise, to review the proposed actions, respectively. CASAC completed its review of the Sulfur Oxides NAAQS on April 30, 2018.

*National Emission Standards for Hazardous Air Pollutants for Hydrochloric Acid Production Residual Risk and Technology Review (RIN 2060-AT74)*: This action does not merit further SAB consideration. While the details of each Residual Risk and Technology Review (RTR) are unique to the sources and pollutants being evaluated, the general approaches and methodologies

employed in EPA RTRs have become standardized, have been employed in numerous previous RTRs, and have been subject to multiple peer reviews over the past 17 years, most recently in 2009. As EPA's RTR methodologies are refined and revised over time, there is a need for periodic peer reviews of the changing methods. The SAB is completing a review of recent revisions to the screening methodologies used to support RTR reviews. Given the extensive past and ongoing peer reviews no additional SAB review is warranted.

*Pesticides; Agricultural Worker Protection Standard; Reconsideration of Several Requirements (RIN 2070-AK43)*: This action does not merit further SAB consideration. Per Executive Order 13777, the EPA solicited suggestions about regulations that may be appropriate for repeal, replacement or modification as part of the Regulatory Reform Agenda. Specific changes to the 2015 Worker Protection Standard (WPS) regulations at 40 CFR 170 were suggested and EPA is soliciting public input on these specific revisions. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) contains the requirement that EPA must provide copies of draft proposed and final rules to the FIFRA Science Advisory Panel (SAP) for review of any related scientific issues.

*Fuels Regulation Modernization - Phase 1 (RIN 2060-AT31)*: The planned action does not merit further review by the SAB. This long-term action to "streamline and modernize EPA's existing fuels regulations under 40 CFR part 80" is described as "an administrative action to add clarity to the regulations to help improve compliance, and will not change any currently applicable fuel standards or propose new fuel ones." No new scientific techniques or analysis are contemplated under this planned action, as currently described. Also, the process for this action is in an early stage, with publication of proposed and final regulations planned for 2019. As such, consideration by the SAB is not recommended at this stage in the process.

**SAB Requests Improvements in the Descriptions of EPA Planned Actions**

The SAB thanks the EPA for providing information for consideration but emphasizes that more complete and timely information is required from the Agency to make recommendations and decisions regarding the science supporting planned actions. To improve the process for future reviews of the semi-annual regulatory agenda, the SAB strongly recommends that EPA enhance descriptions of future planned actions by providing specific information on the peer review associated with the science basis for actions and more description of the scientific and technological bases for the actions. In reviewing the Spring 2017 and Fall 2017 Regulatory Agendas, there were several cases where key information about the planned action, its supporting science and peer review were provided only after specific Work Group requests. The SAB finds that the written responses to fact-finding questions were not comprehensive and participation in the fact-finding teleconference was limited. EPA should provide such information in the initial descriptions provided to the Work Group.

Effective SAB evaluation of planned actions requires the EPA to characterize:

- All relevant key information associated with the planned action;

- The science supporting the regulatory action. If there is new science to be used, provide a description of what is being developed. If the Agency is relying on existing science, provide a short description.
- The nature of planned or completed peer review. To the extent possible, provide information about the type of peer review, the charge questions provided to the reviewers, how relevant peer review comments were integrated into the planned action, and information about the qualifications of the reviewer(s).

The SAB urges the Agency to provide more complete information to support future SAB decisions about the adequacy of the science supporting actions in future regulatory agendas.

On behalf of the SAB, I thank you for the opportunity to support EPA through consideration of the science supporting actions in the Agency's regulatory agenda.

Sincerely,

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Dr. Michael Honeycutt, Chair
Science Advisory Board

Enclosure
(1) Summary of Proposed Actions Considered
(2) Roster of SAB Members

## NOTICE

This report has been written as part of the activities of the EPA Science Advisory Board (SAB), a public advisory group providing extramural scientific information and advice to the Administrator and other officials of the Environmental Protection Agency. The SAB is structured to provide balanced, expert assessment of scientific matters related to problems facing the Agency. This report has not been reviewed for approval by the Agency and, hence, the contents of this report do not necessarily represent the views and policies of the Environmental Protection Agency, nor of other agencies in the Executive Branch of the Federal government, nor does mention of trade names of commercial products constitute a recommendation for use. Reports of the SAB are posted on the EPA Web site at http://www.epa.gov/sab.

## Summary of Proposed Actions Considered

| Proposed actions in the Spring 2017 Unified (Regulatory) Agenda and Regulatory Plan considered by the Science Advisory Board and whether to provide advice and comment on the adequacy of the science supporting the action | | |
|---|---|---|
| **RIN[1]** | **Planned Action Title** | **Recommendation** |
| 2060-AT77 | Reconsideration of Final Determination: Mid Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light Duty Vehicles | Merits SAB Review |
| 2060-AT79 | Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits | Merits SAB Review |
| 2010-AA12 | Increasing Consistency, Reliability, and Transparency in the Rulemaking Process | Defer SAB consideration of the planned action until more information is available |
| 2060-AT67 | State Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units | Does not merit further SAB review |
| 2060-AT68 | Review of the Primary National Ambient Air Quality Standards for Sulfur Oxides | Does not merit further SAB review |
| 2060-AT74 | National Emission Standards for Hazardous Air Pollutants for Hydrochloric Acid Production Residual Risk and Technology Review | Does not merit further SAB review |
| 2070-AK43 | Pesticides; Agricultural Worker Protection Standard; Reconsideration of Several Requirements | Does not merit further SAB review |
| 2060-AS35 | Review of the Secondary National Ambient Air Quality Standards for Ecological Effects of Oxides of Nitrogen, Oxides of Sulfur and Particulate Matter. | Does not merit further SAB review |
| 2060-AT31 | Fuels Regulation Modernization - Phase 1 | Does not merit further SAB review |

[1]The Regulatory Identification Number provides a hyperlink to the Office of Management and Budget's webpage and information on the planned action provided in the Unified Regulatory Agenda on the OMB website http://www.reginfo.gov/

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