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**Testimony of  
Nancy R. Kruger  
on behalf of the  
National Association of Clean Air Agencies  
before the  
U.S. Environmental Protection Agency**

**on the  
Proposed Finding that Greenhouse Gas Emissions from Aircraft  
Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to  
Endanger Public Health and Welfare and  
Advance Notice of Proposed Rulemaking  
Docket ID No. EPA-HQ-OAR-2014-0828**

**August 11, 2015  
Washington, DC**

Good morning. I am Nancy Kruger, Deputy Director of NACAA – the National Association of Clean Air Agencies. Thank you for this opportunity to testify on behalf of NACAA on the U.S. Environmental Protection Agency’s (EPA) Proposed Finding that Greenhouse Gas Emissions from Aircraft Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare and Advance Notice of Proposed Rulemaking seeking input on the ongoing development by the International Civil Aviation Organization (ICAO), and the potential forthcoming development by EPA (pending a final endangerment finding), of an aircraft carbon dioxide (CO<sub>2</sub>) emissions standard, as published in the *Federal Register* on July 1, 2015 (80 Fed. Reg. 37,757). NACAA is a national, non-partisan, non-profit association of air pollution control agencies in 41 states, the District of Columbia, four territories and 116 metropolitan areas. The air quality professionals in our member agencies have vast experience dedicated to improving air quality in the U.S. This testimony is based upon that experience. The views expressed in this testimony do not represent the positions of every state and local air pollution control agency in the country.

*Endangerment Finding*

First, with respect to the endangerment finding, NACAA commends EPA for its proposal to 1) find that greenhouse gas (GHG) concentrations in the atmosphere endanger the public health and welfare of current and future generations within the meaning of section 231(a) of the Clean Air Act (CAA), 2) find that GHG emissions from certain aircraft engine classes cause or contribute to “air pollution” that endangers public health and welfare and 3) use the same definition of “air pollution” under section 231(a) as the agency used in making its 2009 Endangerment Finding under CAA section 202(a) related to motor vehicles –

namely, the same six well-mixed GHGs that together were identified as the relevant “air pollution”: CO<sub>2</sub>, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

For its proposed finding under section 231, EPA relies primarily on the expansive scientific and technical evidence in the record that supported the 2009 Endangerment Finding. In that finding, which NACAA supported,<sup>1</sup> EPA concluded that GHGs endanger public health and public welfare. For its current proposed finding under section 231, EPA also gave careful consideration to new, major, peer-reviewed scientific assessments released subsequent to the closing of the administrative record for the 2009 Endangerment Finding. In doing so, the agency found no information suggesting that it would be reasonable to reach a different conclusion now than it did in 2009. Instead, the agency found that, in many cases, the new assessments strengthen and add to the already comprehensive scientific evidence that GHGs in the atmosphere may reasonably be anticipated to endanger public health and welfare, thus providing further support for this proposed finding under section 231.

EPA states in its proposal that the 2009 Endangerment Finding is “firmly established and well settled” and that there is no need to reopen or revisit it in order to make an additional finding under section 231. NACAA agrees and supports EPA’s proposal to make such an additional finding.

#### *Advance Notice of Proposed Rulemaking*

EPA’s proposed finding under section 231 sets the stage for harmonizing international and U.S. aircraft CO<sub>2</sub> emission standards. With ICAO, in which the U.S. participates, expected to adopt an international standard as early as 2016, we appreciate EPA’s request, through the ANPR, for input on establishing that standard and the potential use of CAA section 231 to adopt and implement the ICAO standard domestically. NACAA endorses the United States’ continued support for adopting an international standard as well as EPA adoption of a domestic standard that will address this source category in a significant way.

According to EPA, aircraft represent the single largest U.S. transportation source of GHG emissions not yet subject to GHG standards, emitting 11 percent of U.S. transportation sector GHG emissions, 3 percent of total U.S. GHG emissions, 29 percent of GHG emissions from all aircraft worldwide and 0.5 percent of total worldwide GHG emissions. On an international scale, in 2010, global aircraft GHG emissions were 11 percent of global transportation sector GHG emissions and 2 percent of total global GHG emissions.

Clearly, this is a sector that merits regulation commensurate with other transportation sectors. ICAO and EPA must establish as rigorous and comprehensive a regulatory package as possible. In the U.S., this is especially critical since state and local air pollution control agencies do not have authority under the federal CAA to regulate aircraft emissions beyond the limits set by EPA. Accordingly, NACAA offers the following overarching comments on the three key issues EPA highlights in the ANPR, namely applicability, timing and stringency of an aircraft CO<sub>2</sub> emissions standard.

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<sup>1</sup> NACAA Comments on EPA’s Proposed Endangerment and Cause or Contribute Findings for GHGs under Section 202(a) of the Clean Air Act (June 17, 2009), [http://www.4cleanair.org/sites/default/files/resources/NACAA\\_Endangerment\\_Comments\\_FINAL-lthd.pdf](http://www.4cleanair.org/sites/default/files/resources/NACAA_Endangerment_Comments_FINAL-lthd.pdf).

ICAO, through its Committee on Aviation Environmental Protection, is considering various approaches for the applicability of an aircraft CO<sub>2</sub> standard, with the fundamental question being whether the standard should apply to in-production aircraft or only to completely new aircraft type designs. NACAA believes it is essential that the standard apply to in-production aircraft and new type designs and that the definition of “in-production” be any covered aircraft produced after the compliance deadline. We simply cannot afford to forego the emissions reductions to be garnered from regulating in-production engines and find no persuasive reason to forego them.

On the issue of timing, NACAA recommends that the standard take effect as soon as possible – by 2020 for new aircraft types and by 2023 for in-production aircraft – since there is no reason to delay the effective date.

NACAA is still studying the CO<sub>2</sub> stringency options identified by EPA in the ANPR, however we can say now that our association strongly encourages ICAO and EPA to set standards that are as stringent as possible and that the standard be technology forcing rather than technology following.

NACAA would also like to touch briefly on a few additional issues related to an aircraft CO<sub>2</sub> emissions standard.

First, we recommend that engines associated with, but not part of, an aircraft also be addressed by an aircraft CO<sub>2</sub> standard. Key among these are auxiliary power units.

Second, we recommend that EPA pursue opportunities for establishing standards for in-use aircraft, which, for example, can be retrofitted with winglets, which can reduce draft and save fuel.

Third, although the standard at issue here is for CO<sub>2</sub>, there is also the potential for additional NO<sub>x</sub> emissions reductions. We encourage EPA to analyze this potential and take steps to maximize reductions.

Finally, while NACAA supports the establishment of an international aircraft CO<sub>2</sub> emissions standard through ICAO, a domestic standard that reaps the full measure of potential reductions from this source category is critically important. Therefore, we urge that EPA be prepared to adopt a more rigorous program and standards than ICAO if the international standard falls short – including with respect to the items we have addressed in this testimony.

In the coming weeks, we will continue to study these and other issues related to EPA’s proposed endangerment finding and ANPR and will offer additional comments in writing by the August 31, 2015 deadline. In the meantime, we appreciate the opportunity to provide the comments we have offered today and look forward to continuing to work with EPA on this important initiative.