

EPA Moves Closer to Regulating Aircraft Engine GHG Emissions (June 2015)

On June 10, 2015, the U.S. Environmental Protection Agency (“EPA”) took a major step toward the establishment of greenhouse gas (“GHG”) emission standards for civilian aircraft engines – the single largest GHG-emitting transportation source for which such U.S. standards have not yet been put in place – when the agency issued (i) a proposed finding that aircraft GHG emissions cause or contribute to air pollution that may reasonably be expected to endanger the public health and welfare (“Proposed Finding”), and (ii) an advance notice of proposed rulemaking (“ANPRM”).ⁱ If the Proposed Finding is finalized, the EPA would be obligated to promulgate GHG emission standards for civilian aircraft engines, with the U.S. Federal Aviation Administration (FAA) then enacting regulations to implement the EPA standards in connection with aircraft certification approvals. Importantly, the EPA’s action comes ahead of an anticipated carbon dioxide (“CO₂”) emissions standard for aircraft engines from the International Civil Aviation Organization (“ICAO”), a specialized body of the United Nations. This ICAO international CO₂ emissions standard is expected to be finalized in early 2016.

Background

Presently, U.S. aircraft account for 11 percent of GHG emissions emitted by the U.S. transportation sector and three (3) percent of total U.S. GHG emissions. The introduction of modern, more fuel efficient aircraft by U.S. airlines as well as operational and technological advancements in recent years have resulted in demonstrable GHG emission reductions on a per-flight basis. Nevertheless, the EPA estimates that U.S. aircraft GHG emissions will increase by nearly 50 percent over the next two decades due to the overall projected growth of the aviation sector.

Section 231(a) of the Clean Air Act (“CAA”) provides that the EPA “shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in [its] judgment causes, or contributes to, air pollution which may



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reasonably be anticipated to endanger public health or welfare.”ⁱⁱ In late 2007, four environmental groups – Friends of the Earth, Oceana, Center for Biological Diversity and Earthjustice (the “Petitioners”) – petitioned the EPA to make an endangerment finding under CAA Section 231(a) and promulgate standards for aircraft engine GHG emissions, and, in 2010, sued the EPA in U.S. district court after the agency had failed to conduct such an endangerment finding.ⁱⁱⁱ In response to the Petitioners’ suit, the EPA moved to dismiss their complaint on the grounds that CAA Section 231(a) merely vested EPA with discretion to conduct endangerment findings and did not compel the agency to conduct such an analysis.^{iv} In 2011 the district court concluded that the language of CAA Section 231(a) indicated that the Congress intended to impose a duty on the EPA to conduct an endangerment finding and, as a consequence, the court denied the EPA’s motion to dismiss.^v Thereafter, the EPA’s Assistant Administrator for the Office of Air and Radiation issued a memorandum to the Petitioners committing the EPA to conduct such a proceeding i.e., a proceeding to determine whether aircraft engine GHG emissions cause or contribute to air pollution which reasonably may be expected to endanger the public health or welfare.^{vi} The Proposed Finding is part of this proceeding.

In addition to EPA’s potential regulation of aircraft engine GHG emissions under the CAA, the ICAO has been engaged in a long-term effort to develop an international CO₂ emissions standard. This effort began in earnest in 2010, when the ICAO Assembly passed a resolution calling for the development of such a standard, followed by a unanimous agreement reached by the ICAO Council’s Committee on Aviation Environmental Protection (“CAEP”) in 2012 on an appropriate metric system to measure CO₂ emissions produced by aircraft. Agreement on this metric system was critical, as it permitted the CAEP to thereafter embark on the development of aircraft engine certification procedures and a defined scope of applicability. For more than four years, the EPA and FAA, which represent the U.S. Government on the CAEP, have been involved in these international efforts. As noted above, an international standard is expected to be adopted by ICAO in early 2016.

Historically, when the ICAO has adopted aircraft engine emission standards, the EPA has initiated rulemakings to ensure U.S. domestic requirements are consistent with ICAO’s international standards. For example, the EPA in 2005 issued final regulations establishing new domestic U.S. aircraft engine emission standards for oxides of nitrogen (NO_x) and test procedures for gaseous exhaust emissions to align U.S. requirements with ICAO standards and procedures.^{vii} However, the Convention on International Civil Aviation (the “Convention”), the treaty which established the ICAO, does allow individual contracting States to the Convention to adopt national environmental requirements more stringent than ICAO’s international standards if such adoption is justified.

The Proposed Finding and ANPRM

In issuing the Proposed Finding, the EPA states that it has relied upon scientific and technical evidence reviewed in connection with an EPA endangerment finding issued in 2009 under CAA Section 202(a), pertaining to GHG emissions from motor vehicles, as well as more recent studies. The EPA proposes to make its aircraft engine endangerment finding using the same six well-mixed GHGs (carbon dioxide, methane, nitrus oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) that collectively were defined as the relevant air pollution in the 2009 motor vehicle endangerment finding.

The aircraft engines covered by the Proposed Finding are those used in U.S. subsonic jet aircraft with a maximum takeoff weight (“MTOW”) of more than 5,700 kilograms (approximately 12,566 pounds) or U.S. turboprop aircraft with a MTOW of more than 8,618 kilograms (approximately 18,999 pounds). Under this

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threshold, new engines in Boeing and Airbus commercial jet aircraft, in most regional jet aircraft (including the Embraer E-Jet family and Canadair CRJ family), and in larger turboprop aircraft such as the Aerei da Trasporto Regional ATR 72 and Bombardier Q400, would be covered. Also covered would be new engines in a number of larger private business jets. The EPA has requested public comment on the classes and sizes of aircraft to which the Proposed Finding applies. Importantly, the Proposed Finding does not extend to engines in military aircraft or small turboprops, small jet aircraft, piston-engine aircraft or helicopters.

The Proposed Finding strongly indicates that the agency will finalize its determination that air pollution from aircraft GHG emissions can reasonably be expected to endanger public health and welfare under CAA Section 231(a). As the EPA explains in its Proposed Finding, “[t]he [EPA’s] view is that the body of scientific evidence amassed in the record for the [motor vehicle] 2009 Endangerment Finding [] compellingly supports an [aircraft engine] endangerment finding under CAA [S]ection 231(a) . . . No information or analyses published since late 2009 suggest that it would be reasonable for the EPA to now reach a different or contrary conclusion for purposes of CAA [Section 231(a)] than the Agency reached for purposes of section 202(a).”

Importantly, the EPA also has described the Proposed Finding as “an initial step in the process for EPA to adopt CO₂ standards promulgated by ICAO in the future.” Along these lines, the accompanying ANPRM provides information on the ICAO emissions standard-setting process and requests input on the setting of standards at ICAO and any corresponding U.S. domestic regulations that presumably would follow. Among public comments requested by the EPA are those addressing (i) the appropriate effective dates for an international CO₂ emissions standard, (ii) the appropriate stringency levels for the international standard, and (iii) whether, and to what extent, the international standard should be extended to new in-production aircraft and new aircraft types. Public comments on both the Proposed Finding and ANPRM are due within 60 days of publication in the [Federal Register](#). The EPA also intends to hold a public hearing on the Proposed Finding and ANPRM in Washington, D.C. on August 11, 2015.

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- ⁱ The EPA docket for the Proposed Finding and the ANPRM is EPA-HQ-OAR-2014-0828.
- ⁱⁱ 42 U.S.C. § 7571(a)(2)(A) (emphasis added).
- ⁱⁱⁱ [Center for Biological Diversity v. EPA](#), Case 1:10-cv-00985-HHK (D.D.C.), docket entry #1 (complaint) (June 11, 2010).
- ^{iv} [Id.](#), docket entry #9 (motion) (August 20, 2010).
- ^v [Id.](#), docket entry #25 (order) (July 5, 2011).
- ^{vi} June 14, 2012 letter from Gina McCarthy, Assistant Administrator, EPA Office of Air and Radiation, to Mr. J. Martin Wagner of Earthjustice.
- ^{vii} 70 Fed. Reg. 69664 (November 17, 2005).