

preclude the use of those provisions to authorize regulation, (4) a Senate committee proposal to include motor vehicle CO₂ standards in the 1990 CAA amendments failed, (5) Federal statutes expressly addressing global climate change do not authorize regulation, and (6) numerous congressional actions suggest that Congress has yet to decide that such regulation is warranted. These indicia of congressional intent raise the issue of whether the CAA is properly interpreted to authorize regulation to address global climate change.

Congress was well aware of the global climate change issue when it last comprehensively amended the CAA in 1990. During the 1980s, scientific discussions about the possibility of global climate change led to public concern both in the U.S. and abroad. In response, the U.S. and other nations developed the United Nations Framework Convention on Climate Change (UNFCCC). President George H. W. Bush signed, and the U.S. Senate approved, the UNFCCC in 1992, and the UNFCCC took effect in 1994.

The UNFCCC established the “ultimate objective” of “stabiliz[ing] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (Article 2 of the UNFCCC). All parties to the UNFCCC agreed on the need for further research to determine the level at which GHG concentrations should be stabilized, acknowledging that “there are many uncertainties in predictions of climate change, particularly with regard to the timing, magnitude and regional patterns thereof” (findings section of UNFCCC).

Shortly before the UNFCCC was adopted in May 1992, Congress developed the 1990 CAA amendments. A central issue for the UNFCCC—whether binding emission limitations should be set—was also considered in the context of the CAA amendments. As several commenters noted, a Senate committee included in its bill to amend the CAA a provision requiring EPA to set CO₂ emission standards for motor vehicles. However, that provision was removed from the bill on which the full Senate voted, and the bill eventually enacted was silent with regard to motor vehicle CO₂ emission standards. During this same time period, other legislative proposals were made to control GHG emissions, some in the context of national energy policy, but none were passed (*see, e.g.*, S. 324, 101st Cong. (1989); S. 1224, 101st Cong. (1989); H.R. 5966, 101st Cong. (1990)).

In the CAA Amendments of 1990 as enacted, Congress called on EPA to

develop information concerning global climate change and “nonregulatory” strategies for reducing CO₂ emissions. Specifically, uncodified section 821 of the CAA Amendments requires measurement of CO₂ emissions from utilities subject to permitting under title V of the CAA. New section 602 of the CAA directs EPA to determine the “global warming potential” of substances that deplete stratospheric ozone. And new section 103(g) calls on EPA to develop “nonregulatory” measures for the prevention of multiple air pollutants and lists several air pollutants and CO₂ for that purpose.

Notably, none of these provisions authorizes the imposition of mandatory requirements, and two of them expressly preclude their use for regulatory purposes (sections 103(g) and 602). Only the research and development provision of the CAA—section 103—specifically mentions CO₂, and the legislative history of that section indicates that Congress was focused on seeking a sound scientific basis on which to make future decisions on global climate change, not regulation under the CAA as it was being amended. Representatives Roe and Smith, two of the principal authors of section 103 as amended, explained that EPA’s “science mandate” needed updating to deal with new, more complex issues, including “global warming” (A Legislative History of the Clean Air Act Amendments of 1990, 103 Cong., 1st Sess., S. Prt. 103–38, Vol. 2, pp. 2776 and 2778). They expressed concern that EPA’s research budget had been too heavily focused on supporting existing regulatory actions when the Agency also needed to conduct long-term research to “enhance EPA’s ability to predict the need for future action” (*id.* at 2777).

In providing EPA with expanded research and development authority, however, Congress did not provide commensurate regulatory authority. In section 103(g), Congress directed EPA to establish a “basic engineering research and technology program to develop, evaluate and demonstrate” strategies and technologies for air pollution prevention and specifically called for improvements in such measures for preventing CO₂ as well as several specified air pollutants. But it expressly provided that nothing in the subsection “shall be construed to authorize the imposition on any person of air pollution control requirements.” As if to drive home the point, section 103(g) was revised in conference to include the term “nonregulatory” to describe the “strategies and technologies” the subsection was intended to promote. In

its treatment of the global climate change issue in the CAA amendments, Congress made clear that it awaited further information before making decisions on the need for regulation.

Beyond Congress’ specific CAA references to CO₂ and global warming, another aspect of the Act cautions against construing its provisions to authorize regulation of emissions that may contribute to global climate change. The CAA provisions addressing stratospheric ozone depletion demonstrate that Congress has understood the need for specially tailored solutions to global atmospheric issues, and has expressly granted regulatory authority when it has concluded that controls may be needed as part of those solutions. Like global climate change, the causes and effects of stratospheric ozone depletion are global in nature. Anthropogenic substances that deplete stratospheric ozone are emitted around the world and are very long-lived; their depleting effects and the consequences of those effects occur on a global scale. In the CAA prior to its amendment in 1990, Congress specifically addressed the problem in a separate portion of the statute (part B of title I) that recognized the global nature of the problem and called for negotiation of international agreements to ensure world-wide participation in research and any control of stratospheric ozone-depleting substances. In the 1990 CAA amendments, Congress again addressed the issue in a discrete portion of the statute (title VI) that similarly provides for coordination with the international community. Moreover, both incarnations of the CAA’s stratospheric ozone provisions contain express authorization for EPA to regulate as scientific information warrants. In light of this CAA treatment of stratospheric ozone depletion, it would be anomalous to conclude that Congress intended EPA to address global climate change under the CAA’s general regulatory provisions, with no provision recognizing the international dimension of the issue and any solution, and no express authorization to regulate.

EPA’s prior use of the CAA’s general regulatory provisions provides an important context. Since the inception of the Act, EPA has used these provisions to address air pollution problems that occur primarily at ground level or near the surface of the earth. For example, national ambient air quality standards (NAAQS) established under CAA section 109 address concentrations of substances in the ambient air and the related public health and welfare problems. This has meant setting