University of Michigan Journal of Law Reform Caveat

Volume 46 | Issue 1

2012

Past Its Prime: Why the Clean Air Act Is In Need of Modification

Levi Smith
University of Michigan Law School

UNIVERSITY OF MICHIGAN

JOURNAL *of* LAW REFORM ONLINE

COMMENT

PAST ITS PRIME: WHY THE CLEAN AIR ACT IS IN NEED OF MODIFICATION

Levi Smith*

The Clean Air Act (CAA)[1] is the primary federal statute regulating the emission of air pollutants. First enacted in 1970, the CAA requires, *inter alia*, the federal government to establish air quality goals[2] and states to develop implementation plans to achieve those goals.[3] The most stringent requirements of the CAA are imposed on "new" or "modified" sources of pollution, such as sulfur dioxide, nitrous oxides, and particulate matter.[4] Sources that were operating when the CAA was enacted are mostly exempt from regulation under the Act.[5] Because of the substantial costs associated with the CAA standards, there is an incentive for existing sources to stay in operation instead of modifying existing or opening new facilities. This subverts the goals of the CAA because the most inefficient and polluting sources stay in operation rather than being replaced with newer, cleaner plants and new pollution control technologies. This Comment argues for federal regulation of existing sources of pollution under the CAA and suggests ways by which the federal government could encourage investment in newer and cleaner industrial sources.

---

* J.D. Candidate, December 2013, University of Michigan Law School.

1. Clean Air Act, 42 U.S.C. §§ 7401-7671q (2006).
2. *Id.* § 7409.
3. *Id.* § 7410.
4. *Id.* § 7411 ("Standards of performance for new stationary sources"); *see also* Jonathan Remy Nash &Richard L. Revesz, *Grandfathering and Environmental Regulation: The Law and Economics of New Source Review*, 101 NW. U. L. REV. 1677, 1678 (2007) ("Congress decided to subject new sources of air pollution to stringent pollution control standards.").
5. Nash & Revesz, *supra* note 4, at 1678 (citations omitted) ("[The CAA] 'grandfathered' preexisting sources, leaving them free of federal regulation. In the ensuing decade … statutory and regulatory development made clear that a 'modification' of a grandfathered plant that increased the plant's pollution emissions would subject it to the same federal standards applied to 'new sources.'").

The CAA imposes both technology-based standards on individual sources of air pollution[6] and national, uniform ambient air quality standards.[7] States must administer a regulatory program that achieves the required ambient air quality standards through the use of pollution control technology.[8] Pollution control can be quite expensive for sources of air pollution. For example, in 2000, the direct compliance costs of the CAA were estimated to be around $20 billion for all regulated sources combined.[9] However, these standards only apply to "new" or "modified" sources of pollution.[10] New sources are those built after the CAA was enacted.[11] Modified sources are those that were in existence at the time the CAA was enacted but that have undergone a "physical change or change in method of operation" resulting in an increase in "the amount of any air pollutant previously emitted by [the] source or results in the emission of any air pollutant not previously emitted."[12] Unmodified existing sources are exempt from regulation under the CAA.

The regulatory gap between new or modified sources and existing sources has led to the "Old Plant Effect," where "[d]ifferent regulatory standards for old and new plants distort the economic analysis that existing plant owners undertake when deciding whether to modernize or replace a plant."[13] The strict standards imposed by the CAA make it expensive to modify or replace a plant.[14] It is less expensive to keep an older, unmodified plant in operation because air quality standards for these plants are not nearly as strict.[15] Thus, so long as existing plants remain in operation, the goals of the CAA remain out of reach.

The Old Plant Effect and the lack of regulation of existing sources can be explained by erroneous congressional assumptions during the CAA's passage. Legislators assumed that most existing

---

6. 42 U.S.C. § 7411 (2006).
7. *Id.* § 7409.
8. *Id.* § 7410.
9. *See* U.S. ENVTL. & PROT. AGENCY OFFICE OF AIR & RADIATION, THE BENEFITS AND COSTS OF THE CLEAN AIR ACT FROM 1990 TO 2020, 3–7 (2011), *available at* http://www.epa.gov/oar/sect812/feb11/fullreport.pdf.
10. 42 U.S.C. § 7411 (2006).
11. *Id.* § 7411(a)(2).
12. *Id.* § 7411(a)(4).
13. Nash & Revesz, *supra* note 4, at 1708
14. *Id.*
15. *Id.*

sources had a useful economic life of thirty to forty years, meaning most existing sources would be transitioned to newer sources subject to federal regulation in short order.[16] This proved not to be the case. The economic realities of complying with the CAA incentivized plant owners to keep existing plants in operation far beyond the date they were projected to remain useful, thus avoiding the CAA regulatory regime.[17]

To achieve the goals of the CAA, existing sources need to be brought into the regulatory fold. Congress should amend the CAA to impose technology-based emission standards on existing sources, standards which should be imposed incrementally rather than immediately. This approach will prevent imposing large costs on facilities, which could potentially be passed onto consumers in forms of higher prices for their goods.[18] An incremental regime has the benefit of allowing sources to spread the costs of compliance over time but sacrifices the quick reduction in emissions that full compliance offers. While the question of approach is ultimately one for the legislature and should be answered based on the relative costs of compliance and burdens on industry associated with the different regimes, the assumption that old sources would be replaced by new sources has simply not proven true. Existing sources need to be regulated or the goals of the CAA will not be reached, at the expense of the public health and welfare.

Existing source owners will resist legislation requiring old sources to be modified or replaced because this transition would be costly and may in some instances force plants to shut down. To counter and temper this resistance, the federal government needs to encourage investment in new plants by reducing the financial cost of compliance. Financial burden is the cause of the Old Plant Effect and will continue to be a sticking point for meaningful

---

16. *Id.* at 1682

17. RICHARD L. REVESZ, ENVIRONMENTAL LAW AND POLICY 429 (Robert C. Clark et al. eds., 2nd ed. 2012) ("[T]he grandfathering of existing sources in the CAA has provided an incentive to continue running existing facilities in order to avoid triggering the expensive and time-consuming requirements for new and modified facilities.").

18. The Government Accountability Office found that imposing new regulations on existing coal-fired power plants "would likely increase electricity prices in some regions." U.S. GOV'T ACCOUNTABILITY OFFICE, GAO–12–635, EPA REGULATIONS AND ELECTRICITY: BETTER MONITORING BY AGENCIES COULD STRENGTHEN EFFORTS TO ADDRESS POTENTIAL CHALLENGES 38 (2012), *available at* http://www.gao.gov/products/GAO-12–635.

reform.[19] Therefore, reducing costs should be a major goal of remedial legislation. For instance, Congress could offer tax credits for investment in pollution control technology or subsidize this investment, which would be similar to current subsidies for "green" energy initiatives.[20] Congress could also impose a tax on fuel sources that would be used to subsidize investment.[21] Additionally, the federal government could offer low-interest loans to sources, which would allow them to finance pollution control technologies for years to come. Finally, the option to force sources into compliance exists through the broad powers of Congress. The viability of this option depends on the contemporary political winds and how important the CAA's goals are to the legislature. In any event, achieving the goals of the CAA by regulating existing sources is imperative. The federal government needs to explore creative and cooperative policies to encourage transition to cleaner sources as soon as possible.

19. Nash & Revesz, *supra* note 4, at 1711 (explaining that environmental compliance costs influence source owners' choices regarding existing and new sources).

20. *See, e.g.*, Qualifying Advanced Energy Project Credit, 26 U.S.C. § 48C (2006).

21. *See, e.g.*, Mona Hymel, *The United States' Experience With Energy-Based Tax Incentives: The Evidence Supporting Tax Incentives for Renewable Energy*, 38 LOY. U. CHI. L.J. 43 (2006) (arguing, generally, that the United States has historically used the tax code to influence energy policy and choices).