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United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued February 20, 2004

Decided June 22, 2004

No. 03-1120

Bluewater Network, Petitioner

v.

Environmental Protection Agency and Michael O. Leavitt, Administrator, United States Environmental Protection Agency, Respondents

On Petition for Review of an Order of the Environmental Protection Agency

J. Martin Wagner argued the cause for the petitioner.

Barbara B. Baird and Frances L. Keeler were on brief for amicus curiae, South Coast Air Quality Management District.

Eileen T. McDonough, Attorney, United States Department of Justice, argued the cause for the respondents. John

Bills of costs must be filed within 14 days after entry of judgment. The court looks with disfavor upon motions to file bills of costs out of time.

C. Cruden, Deputy Assistant Attorney General, United States Department of Justice, was on brief.

Janice K. Raburn, for American Petroleum Institute, John Longstreth, for The Transportation Institute, C. Jonathan Benner, for International Association of Independent Tanker Owners and Chamber of Shipping of America, and Marc J. Fink for World Shipping Council, were on joint brief for amici curiae, American Petroleum Institute et al. Sean T. Connaughton, for International Association of Independent Tanker Owners and Chamber of Shipping of America, entered an appearance.

Before: GINSBURG, Chief Judge, HENDERSON, Circuit Judge, and WILLIAMS, Senior Circuit Judge.

Opinion for the court filed by *Circuit Judge* HENDERSON.

KAREN LECRAFT HENDERSON, Circuit Judge: Petitioner Bluewater Network (Bluewater) challenges the Environmental Protection Agency's (EPA or Agency) final rule adopting a two-tiered approach to setting emissions standards for "Category 3" marine diesel engines which are "very large marine engines used primarily for propulsion power on ocean-going vessels such as container ships, tankers, bulk carriers, and cruise ships." Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters Per Cylinder, 68 Fed. Reg. 9746, 9747 (Feb. 28, 2003) (to be codified at 40 C.F.R. pts. 9 & 94). Bluewater claims that the rule fails to reduce emissions from those engines and entirely omits to regulate the emissions from foreign-flagged ships' engines, as required by section 213(a)(3) of the Clean Air Act (CAA). 42 U.S.C. § 7547(a)(3); see also id. § 7607(d)(9)(A). We conclude that the EPA reasonably interpreted and implemented the CAA and therefore deny Bluewater's petition for review.

I.

In 1970, the Congress enacted the CAA "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." Id. § 7401(b)(1). In 1990, it added section 213, which authorizes the EPA to establish emissions standards for "nonroad engines and nonroad vehicles." *Id.* § 7547(a)(1); *see Husqvarna AB v. EPA*, 254 F.3d 195, 197 (D.C. Cir. 2001); *see also Engine Mfrs. Ass'n v. EPA*, 88 F.3d 1075, 1080-81 (D.C. Cir. 1996). Section 213(a)(1) and (2) requires the EPA to determine whether the emissions from "new and existing nonroad engines or nonroad vehicles" are "significant contributors" to air pollution in areas with air quality problems. 42 U.S.C. § 7547(a)(1) & (2). Section 213(a)(3) in turn requires the EPA to promulgate emissions standards for all "*new* nonroad engines ... which in the Administrator's judgment cause, or contribute to, such air pollution." *Id.* § 7547(a)(3) (emphasis added). The standards must:

achieve the greatest degree of emission reduction achievable through the application of technology which the [EPA] Administrator determines will be available for the engines or vehicles to which such standards apply, giving appropriate consideration to the cost of applying such technology within the period of time available to manufacturers and to noise, energy, and safety factors associated with the application of such technology.

Id. The standards must also "take effect at the earliest possible date considering the lead time necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period and energy and safety." Id. § 7547(b). Finally, the EPA must revise the standards from "time to time." Id. § 7547(a)(3).

In 1994, the EPA determined that nonroad engines and vehicles contribute significantly to air pollution in problem areas throughout the country and set about the process of setting emissions standards for various categories of engines, including marine diesel engines. *See* Control of Air Pollution; Determination of Significance for Nonroad Sources and Emission Standards for New Nonroad Compression-Ignition Engines at or Above 37 Kilowatts, 59 Fed. Reg. 31, 306 (June 17, 1994) (to be codified at 40 C.F.R. pts. 9 & 89); Control of Air Pollution: Emission Standards for New Gasoline Spark-Ignition and Diesel Compression-Ignition Marine Engines, 59 Fed. Reg. 55,930 (notice of proposed rulemaking) (Nov. 9, 1994). As noted above, the Category 3 marine diesel engines that are the subject of this rulemaking are some of the largest engines in the world, with greater than 30 liters displacement per cylinder. See 68 Fed. Reg. at 9747. The engines burn residual fuel oil – a byproduct of refining crude oil into higher-grade products - which tends to have higher ash, sulfur and nitrogen content than other fuels. See id. at 9767. Residual fuel oil also has a higher variability than other fuels, which makes engine emissions more difficult to control. See id. at 9763. The engines thus contribute to national ozone, carbon monoxide, nitrous oxide (NOx) and particulate matter levels, especially near commercial ports like New Orleans, LA and along coastal areas like Santa Barbara, CA. See id. at 9751. Existing diesel engine technologies, such as turbo- and super-charging, in-cylinder injection improvements and engine cooling, are used to increase the efficiency and reduce emissions from these engines. See *id.* at 9749. There are also new, advanced technologies, including systems that introduce water into the combustion process, selective catalytic reduction systems that add a reducing agent like ammonia into the engine's exhaust and the use of fuel cells. See id. at 9764-67.

The EPA's effort to set emissions standards for Category 3 engines coincided with similar action taken by the International Marine Organization (IMO).¹ See, e.g., Control of Air Pollution; Emission Standards for New Gasoline Spark-Ignition and Diesel Compression-Ignition Marine Engines; Exemptions for New Nonroad Compression-Ignition Engines at or Above 37 Kilowatts and New Nonroad Spark-Ignition Engines at or Below 19 Kilowatts, 61 Fed. Reg. 4600, 4618

¹ The IMO is an agency of the United Nations set up to improve the safety of international shipping and to control marine pollution. *See* International Marine Organization, at www.imo.org ("Safer Shipping, Cleaner Oceans"). It consists of 163 member countries, including the United States. *Id.*

(supplemental notice of proposed rulemaking; proposed revisions) (Feb. 7, 1996); 59 Fed. Reg at 55,934. In 1997, the IMO formally adopted Annex VI to the International Convention on the Prevention of Pollution from Ships, 1973, as Modified by the Protocol of 1978 Relating Thereto (MAR-POL). Annex VI prescribes a NOx emissions limit for diesel engines on ships constructed on or after January 1, 2000 and for engines undergoing "major conversion" on or after that date. Regulation 13 to Annex VI of MARPOL. Annex VI has recently been ratified by the requisite number of IMO member countries and will take effect in May 2005. See http://www.imo.org/home.asp (last visited June 2, 2004).

Following the IMO's adoption of Annex VI, the EPA noticed its intent to set the CAA emissions standards for Category 3 engines at the same level set by Annex VI. See Control of Emissions of Air Pollution from New CI Marine Engines at or Above 37 Kilowatts, 63 Fed. Reg 28,309, 28,313 (advance notice of proposed rulemaking) (May 22, 1998). It reasoned that Category 3 engines "have only a minimal impact on U.S. air quality" because they operate in U.S. waters for "only a limited amount of time" and that any stricter standards could be applied to U.S. ships only, potentially compromising their competitiveness in the world shipping market. Id. Several months later, the EPA decided to postpone adopting emissions standards for these engines. Control of Emissions of Air Pollution from New CI Marine Engines at or Above 37 kW, 63 Fed. Reg. 68,508, 68,541-42 (notice of proposed rulemaking) (Dec. 11, 1998). Because it believed Annex VI's standards to be appropriate for Category 3 engines under the CAA based on its analysis of available control technologies, the EPA concluded that adopting those standards "would be unnecessary and redundant" because it expected U.S. vessels to comply with the Annex VI standards. Id. at 68,542. In the same notice, the EPA also proposed excluding smaller (categories 1 and 2) diesel engines on foreign-flagged vessels in U.S. waters from any emissions standards, *id.* at 68,516-17, because, relying in part on United States Treasury Department rulings and tariff schedules, it deemed foreign-flagged ships engaged in international trade not to have been imported into the United States. *Id.* The EPA's final rule adopted both positions: it did not set emissions standards for Category 3 engines and it defined the Category 1 and Category 2 engines to which its rule applied so as to exempt those aboard foreign-flagged ships. Control of Emissions of Air Pollution From New Marine Compression-Ignition Engines at or Above 37 kW, 64 Fed. Reg. 73,300, 73,302, 73,306 (Dec. 29, 1999) (codified at 40 C.F.R. pts. 89, 92, 94).

In 2000, Earth Island Institute, an environmental group, originally petitioned for review of that rule; Bluewater became the petitioner in 2002. As part of a settlement agreement in that matter, the EPA agreed to initiate the rulemaking that resulted in the rule now under review. Thus, in May 2002, the EPA proposed, among other things, to formally adopt the Annex VI emissions standards as the CAA standards for Category 3 engines. Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 30 Liters/Cylinder, 67 Fed. Reg. 37,548 (proposed rule) (May 29, 2002). It also invited comment on whether it should adopt stricter emissions standards in the future and expand those standards to cover Category 3 engines on foreign-flagged vessels entering U.S. territory. *Id*.

On February 28, 2003, the EPA issued the rule under review. Control of Emissions from New Marine Compression Ignition Engines at or Above 30 Liters Per Cylinder, 68 Fed. Reg. 9746 (Feb. 28, 2003) (to be codified at 40 C.F.R. pts. 9 & 94). The rule provides a two-step approach for setting emissions standards for Category 3 engines under the CAA. Id. at 9748-49. The first step, which the EPA referred to as its "near term Tier 1" standard, tracks Annex VI's emissions standards and took effect on January 1, 2004. Id. at 9749. The standards, the EPA explained, apply only to U.S.-flagged ships and are intended to "achieve a 20-percent reduction in the national Category 3 NOx inventory by 2030." Id. at 9757, 9762. The EPA also committed to a second step, imposing longer term "Tier 2 standards" in a rulemaking to be completed "no later than April 27, 2007." Id. at 9749-50. In the future rulemaking, the EPA promised to "consider the state of technology that may permit deeper emission reductions and the status of international action for more stringent standards" as well as "application of [these] standards to engines on foreign vessels that enter U.S. ports." *Id.* at 9746.

In establishing the Tier 1 emissions standards at the Annex VI level and postponing Tier 2 standards to the 2007 rulemaking, the EPA recognized that "manufacturers are generally already meeting the internationally negotiated standards" and thus "[t]he near term standards will require no additional development, design, or testing beyond what manufacturers are already doing to meet the ... Annex VI ... standards." Id. at 9761; see id. at 9749. The EPA explained, however, that the Tier 1 standards are "designed to be achievable immediately without additional research and development" and are thus "based on readily available emission-control technolog[ies]" - like "optimized turbocharging, higher compression ratios, and optimized fuel injection." Id. at 9748-49, 9761. Most importantly, the EPA explained, these standards will be almost immediately (i.e., on January 1, 2004) "enforceable under U.S. law ... regardless of whether Annex VI has entered into force or whether the United States has deposited its instruments of ratification to ... Annex VI." Id. at 9761.

The EPA understood that "manufacturers [could] achieve additional [emission] reductions with more lead time" by "expanding the use and optimization of in-cylinder controls" and by utilizing one or more of the "advanced technologies such as selective catalytic reduction or water injection," and thus that it could have established stricter Tier 1 as well as specific Tier 2 standards. Id. at 9748-49, 9761-62. It noted, however, several problems with both approaches. Stricter Tier 1 standards would require "more lead time" for manufacturers as opposed to the readily-achievable Annex VI standards. Id. at 9749, 9761. Furthermore, there were "several outstanding technical issues concerning the widespread commercial use" of the current, in-cylinder and advanced emission control technologies. Id. at 9748; see id. at 9749, 9761-63. Postponing the adoption of specific, and stricter, standards until the Tier 2 rulemaking allowed the industry and the EPA to "obtain important additional information on the use of these advanced technologies." Id. at 9478, 9763. Additionally, mandating greater reductions via current, incylinder controls alone – which might reduce emissions by 10 or even 30 per cent – risked sacrificing potentially greater future reductions from the combination of in-cylinder controls and the new technologies, which the EPA expected to "be greater than 30 percent below Tier 1 levels." Id. at 9749. Setting specific and stricter Tier 2 standards based on the available and emerging control technologies at the same time that engine manufacturers were investigating other controls could have the perverse effect of encouraging manufacturers to conduct "two separate and possibly conflicting design steps, potentially delaying introduction of advanced emissioncontrol technologies and their anticipated emission reductions." Id.; see id. at 9761. By providing manufacturers additional time to test and study the results of those technologies, the EPA would be better positioned in 2007 "to make a technology-based decision that maximizes emission reductions." Id. at 9749. Finally, the EPA noted that postponing the adoption of stricter standards allowed the United States "to pursue further negotiations in the international arena to achieve more stringent global emission standards for marine diesel engines" inasmuch as, in the EPA's view, "adopting appropriate international standards has the potential to maximize the control of emissions from U.S. and foreign vessels." *Id.* In sum, the EPA decided to adopt the Annex VI emissions standards as the Tier 1 standards in order to "ensure that Category 3 engines achieve the greatest reductions achievable in this [short] time frame, until the more stringent long-term standards [the EPA] adopt[s] [at the Tier 2 rulemaking] go into effect." Id. at 9761.

The EPA also postponed imposing emissions standards on Category 3 engines on foreign-flagged vessels. *Id.* at 9759. The EPA noted that in its 1999 rulemaking for categories 1 and 2 marine diesel engines, it had interpreted the term "new nonroad engine" to exclude such engines on foreign-flagged vessels. *Id.*; *see supra*. Even assuming it had the authority under the CAA to regulate Category 3 engines on foreignflagged ships, the EPA nevertheless opted to postpone the matter until the Tier 2 rulemaking. 68 Fed. Reg. at 9759. Employing the same rationale used to postpone rulemaking for Category 3 engines for U.S. vessels, the EPA concluded that the delay would not "lead to any significant loss in emission reductions" because it expected all foreign-flagged vessels, like U.S. vessels, to comply with the Annex VI standards (as manufacturers had been doing since 2000). *Id.* It also noted that the delay could "help facilitate the adoption of more stringent consensus international standards," *id.*, and stated elsewhere that it would "continue to promote more stringent standards at [the] IMO" and that it "now believe[d] that ... the IMO should consider further reductions of significantly more than 30 percent from the [current Annex VI] NOx limits." *Id.* at 9767.

On April 23, 2003, Bluewater petitioned this court for review of the EPA's Category 3 engine rule. It raises two claims. First, it asserts that the Agency acted arbitrarily and capriciously in failing to adopt standards that reduce emissions from Category 3 engines to the greatest degree achievable through available control technologies. See 42 U.S.C. § 7607(d)(9)(A) (reviewing court may reverse emissions standards promulgated under 42 U.S.C. § 7547 if "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law"). Second, Bluewater contends that the EPA violated the command of section 213(a)(3) of the CAA by failing to regulate emissions from engines on foreign-flagged vessels. See id. § 7547(a)(3).

II.

We give particular deference to the EPA when it acts under "unwieldy and science-driven" statutory schemes like the Clean Air Act. *Husqvarna*, 254 F.3d at 199 (quoting *Appalachian Power Co. v. EPA*, 135 F.3d 791, 801-02 (D.C. Cir. 1998)); see Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 103 (1983) (court is "at its most deferential" if agency is "making predictions, within its area of special expertise, at the frontiers of science"). We will therefore affirm the EPA's action unless it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 42 U.S.C. \$ 7607(d)(9)(A). Our review of the EPA's interpretation of the CAA is governed by the familiar two-step from *Chevron*, U.S.A., Inc. v. NRDC, 467 U.S. 837, 842-43 (1984). We first ask "whether Congress has directly spoken to the precise question at issue," in which case we "must give effect to the unambiguously expressed intent of Congress." Id. If the "statute is silent or ambiguous with respect to the specific issue," however, we move to the second step and defer to the agency's interpretation as long as it is "based on a permissible construction of the statute." Id. at 843.

1. EPA's Two-Tiered Emissions Standards for Category 3 Engines

Bluewater first contends that the EPA's rule adopting twotiered emissions standards for Category 3 engines is arbitrary and capricious because it fails to reduce NOx emissions as required by the CAA. It argues that, because manufacturers are already complying with the Annex VI standards, the Tier 1 standards are simply an iteration of the status quo and effect no reduction in emissions. The contemplated Tier 2 standards, meanwhile, cannot save the rule, Bluewater says, because the EPA has not even committed to stricter Tier 2 standards. Relying on this court's decision in *Husqvarna*, 254 F.3d at 201, Bluewater contends that section 213(a)(3) of the CAA is a "technology-forcing standard" that requires the EPA to adopt stricter emissions standards based on the technologies available to manufacturers, including both incylinder *and* advanced technologies. We disagree.

The EPA rule adopting the two-tiered approach to emissions standards is, we think, a reasonable one that satisfies the requirements of section 213(a)(3) of the CAA. The Agency expects the Tier 1 emissions standards to reduce Category 3 NOx emissions by 20 per cent by 2030. 68 Fed. Reg. at 9762, 9777. Furthermore, after surveying the available technologies and "consider[ing]" emissions reductions beyond the Annex VI standards, the EPA concluded that it could require the use of only those technologies manufacturers currently employed to meet Annex VI's requirements because the Tier 1 standards were scheduled to go into effect less than one year from the date of publication. *Id.* at 9749; *see id.* at 9761. The consideration of "lead time" in setting emissions standards is specifically contemplated by the CAA. 42 U.S.C. § 7547(b) (standards must "take effect at the earliest possible date considering the lead time necessary to permit the development and application of the requisite technology"); *Husqvarna*, 254 F.3d at 202 (EPA appropriately determined that "schedule of declining emission standards ... provide[d] adequate time for manufacturers' transition to cleaner engine technologies"); *see Sierra Club v. EPA*, 325 F.3d 374, 378 (D.C. Cir. 2003) ("The statute ... intends the agency to consider many factors other than pure technological capability, such as costs, *lead time*, safety, noise and energy." (emphasis added)).

Bluewater does not allege that the EPA ignored the available in-cylinder and advanced technologies or improperly evaluated their merit; it argues instead that the Agency impermissibly postponed incorporating them into the emissions standards until the Tier 2 rulemaking in 2007. But the lesson from Husqvarna – a challenge by engine manufacturers to an emissions standard mandating the use of costly control technologies – is not that the EPA must adopt the most stringent standards based on the most advanced control technologies but that the EPA is to arrive at standards that reduce emissions to the greatest degree possible after considering the spectrum of available technologies and the costs and benefits associated with those technologies. See Husquarna, 254 F.3d at 201 ("The record shows that the EPA reasonably arrived at what it determined was the best regulatory standard by ascertaining the greatest degree of emissions reduction achievable while giving appropriate consideration to cost, noise, energy and safety factors."); see also 42 U.S.C. § 7547(a)(3) (standards must achieve greatest reduction available through technology "which the [EPA] Administrator determines will be available ... giving appropriate consideration to the cost of applying such technology"). Indeed, this Court – in interpreting section 202(l)(2) of the CAA² a provision in pari materia with section 213(a)(3) – has acknowledged that, while the CAA is "'technology-forcing,'" "[t]he statute also intends the [EPA] to consider many factors other than pure technological capability, such as costs, lead time, safety, noise and energy" and that "its language does not resolve how the [EPA] should weigh all these factors in the process of finding the 'greatest emission reduction achievable." Sierra Club, 325 F.3d at 378 (quoting Husqvarna, 254 F.3d at 201 and 42 U.S.C. § 7521(*l*)(2)). Here the record indicates that the EPA recognized the merits of the advanced technologies but chose not to forestall their *further* development by either: (1) forcing the industry to ignore them and instead pursue greater traditional in-cylinder reductions only, or (2) mandating their use without complete information and study, thereby potentially handicapping their future (and greater) success. See, e.g., 68 Fed. Reg. at 9749. These considerations are hardly unreasonable; indeed, for this court to reject them would defeat the purpose of the statute by forsaking, in the EPA's determination, greater reductions in air pollution.³ Finally, and perhaps most importantly, the EPA has committed to incorporating the new technologies into stricter emissions standards in the 2007 rulemaking.

² Section 202(l)(2) requires the EPA to enact standards that reduce emissions from motor vehicles and motor vehicle fuels that "reflect the greatest degree of emission reduction achievable through the application of technology which will be available, taking into consideration ... the availability and costs of the technology, and noise, energy, and safety factors, and lead time." 42 U.S.C. § 7521(l)(2).

³ To the extent that Bluewater contends that ongoing treaty negotiations over international emissions standards impermissibly factored into the EPA's decision under section 213(a)(3), that challenge is immaterial because the EPA gave other, independent (and sufficient) reasons to support the two-tiered standards. *See Indiana Mun. Power Agency v. FERC*, 56 F.3d 247, 256 (D.C. Cir. 1995) (upholding agency action resting on several independent grounds if any are valid unless agency was influenced by their *combined* force).

See, e.g., 68 Fed. Reg. at 9761 ("The near-term Tier 1 standards are interim standards. They are intended to ensure that Category 3 engines achieve the greatest reductions achievable in this time frame, until the more stringent long-term standards we adopt go into effect.").

The two-tiered approach and the Tier 1 standards themselves are best viewed as akin to the "anti-backsliding" provision this Court upheld in Sierra Club. 325 F.3d at 379. There we permitted the EPA to utilize a near-term provision preventing fuel refineries and importers from increasing the toxicity levels in their motor vehicle fuel rather than imposing a "more aggressive emissions cap" because the provision was to be in effect for a short period of time only and because it allowed the EPA to "assess achievability on a longer term basis" where "the agency didn't know what technological fixes ... manufacturers would use to" best reduce emissions. Id. at 378-80. Bluewater correctly points out that the Sierra *Club* refineries and importers were operating under other stringent emissions standards already imposed by the EPA, id. at 380, but the Tier 1 standards effect a 20 per cent reduction in NOx emissions and guarantee that the Annex VI standards are "enforceable under U.S. law for engines on vessels flagged or registered in the United States, regardless of whether Annex VI ... enter[s] into force." 68 Fed. Reg. at 9761. Based on the record before us, we conclude that the EPA's two-tiered approach reasonably implements section 213(a)(3) of the CAA.

2. EPA's Decision to Defer Regulation of Engines on Foreign-Flagged Vessels

Bluewater further claims that the CAA requires the EPA to adopt emissions standards for the Category 3 engines of foreign-flagged vessels. Bluewater contends that, because the term "new nonroad engine" does not expressly exclude foreign-flagged vessels' engines, the statute requires their regulation. It further argues that, even if the definition of "new nonroad engine" is ambiguous, the EPA's decision not to regulate Category 3 engines on foreign-flagged vessels at

Tier 1 and instead postpone resolution of the matter until the Tier 2 rulemaking is arbitrary and capricious. We disagree.

We have previously upheld the EPA's determination that "new nonroad engine" in 213(a)(3) is ambiguous. See Engine Mfrs. Ass'n, 88 F.3d at 1086-87. We have also decided that the two-tiered rulemaking is reasonable and Bluewater offers nothing in response to the EPA's claim that delayed resolution of the issue until the 2007 Tier 2 rulemaking would not "lead to any significant loss in emission reductions" because it expects foreign-flagged vessels to "comply with the [Annex VI] standards whether or not they are also subject to the equivalent Clean Air Act standards." 68 Fed. Reg. at 9759. We therefore conclude that Bluewater's claim regarding the EPA's deferment of whether to regulate Category 3 engines on foreign-flagged vessels is premature.

III.

For the foregoing reasons, the petition for review is denied. So ordered.