

IN THE SUPREME COURT OF CALIFORNIA

AMERICAN COATINGS ASSOCIATION,	)	
INC.,	)	
	)	
Plaintiff and Appellant,	)	
	)	S177823
v.	)	
	)	Ct.App. 4/3 G040122
SOUTH COAST AIR QUALITY	)	
DISTRICT,	)	
	)	
Defendant and Respondent.	)	Orange County
	)	Super. Ct. No. 03CC00007
_____	)	

The South Coast Air Quality Management District (District) is charged with regulating nonvehicular air pollution emissions in a large area that encompasses much of Los Angeles and other parts of Southern California, regions that have some of the worst air pollution in the country. This case concerns the District’s 2002 amendments to its Rule 1113, which limits certain pollution-causing substances in paints and coatings. The American Coatings Association (Association), formerly known as the National Paint and Coatings Association, challenged the amendments on the ground that they exceeded the District’s regulatory authority under statutes requiring the use of “best available retrofit control technology.” According to the Association, the District failed to show that technology necessary to meet the emissions limits set by the 2002 amendments was “available” within the meaning of the relevant statutes.

The Association adopts the position of the Court of Appeal below that a technology cannot be considered “available” unless it already exists or is ready to be

assembled at the time a pollution standard is promulgated. The District contends that the relevant statute, which defines “best available retrofit control technology” by reference to “achievable” emissions reductions, authorizes pollution standards that are “technology-forcing.” On the District’s view, if new or developing technology will enable industry to meet a pollution standard by the compliance deadline, that standard is “achievable” — and, under the statute, the technology is “available” — even if the technology does not exist at the time the standard is promulgated. The regulations at issue here were originally proposed in 1999 and amended in 2002, and they required full compliance by July 2006.

The Association also contends that the paint and coating categories employed by Rule 1113 were too broad and heterogeneous, and that the District’s emissions limits were not achievable for many products and applications within a given category. Thus, the Association argues, the District did not adequately demonstrate that the technology needed to meet the standards for such products were “available” under the statute. The District contends that the categories were reasonably drawn and that it need not show that the technology to achieve the emissions limit for each category is available for every paint or coating application within that category. On this issue, the Court of Appeal agreed with the District.

We conclude that the relevant statutes give the District the authority to promulgate pollution standards based on technologies that do not currently exist but are reasonably anticipated to exist by the compliance deadline. In addition, we conclude that the District sufficiently demonstrated that its challenged emissions limits were achievable in each category and that the categories were reasonably drawn. We therefore reverse in part the judgment of the Court of Appeal.

I.

Air pollution is regulated by federal, state, regional, and local governmental entities. The federal Clean Air Act mandates that the Environmental Protection Agency

(EPA) set national ambient air quality standards. (42 U.S.C. § 7409(a).) States have primary responsibility for meeting these standards, and the Clean Air Act requires states to formulate and enforce implementation plans designed to meet national standards within their borders. (*Id.*, §§ 7407(a), 7410.) State implementation plans are subject to EPA approval. (*Id.*, § 7410(k).) If the EPA determines that a state plan is inadequate to meet federal standards or that the requirements of an approved plan are not being met, it may adopt a federal implementation plan and impose sanctions on the state. (*Id.*, §§ 7410(c)(1), 7410(m), 7509.)

A.

Under California law, the California Air Resources Board (Board) is charged with developing the state implementation plan and overseeing its enforcement. (Health & Saf. Code, §§ 39602, 41502-41505; all statutory references hereafter are to this code unless otherwise indicated.) The Board establishes ambient air quality standards to protect public health for each air basin in the state. (§ 39606, subd. (a).) While the Board is responsible for regulating vehicular pollution throughout the state, regulation of nonvehicular emissions is assigned to local and regional air pollution control districts. (§ 39002.) The Legislature has created five regional districts, and the South Coast Air Quality Management District is one. (2 Manaster & Selmi, Cal. Environmental Law and Land Use Practice (1989) § 40.51, pp. 40-86, 40-87 (rev. 2012) (Manaster & Selmi).)

All districts are required to “adopt and enforce rules and regulations to achieve and maintain the state and federal ambient air quality standards in all areas affected by emission sources under their jurisdiction, and shall enforce all applicable provisions of state and federal law.” (§ 40001, subd. (a).) The Board monitors district compliance with air quality standards and, in the case of ozone and carbon monoxide pollution, classifies districts as in attainment of those standards or in moderate, serious, severe, or extreme nonattainment. (§§ 40918, 40419, 40920, 40920.5, 40921.5.) The

nonattainment classifications trigger increasingly stringent requirements on air quality districts to control pollution. (§§ 40918, 40919, 40920, 40920.5.)

The South Coast Air Quality Management District is California's largest air pollution control district. Its jurisdiction, the South Coast Air Basin (Basin), covers all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties, and has some of the worst smog in the United States. The District was created in 1976 by the Lewis-Presley Air Quality Management Act (§ 40400 et seq.), which observed in its findings that the "South Coast Air Basin is a geographical entity not reflected by political boundaries" and that the Basin has "critical air pollution problems." (Stats. 1976, ch. 324., § 5, p. 893; § 40402, subds. (a), (b).) The 1976 act required the District to adopt an air quality management plan to achieve and maintain the state and federal air quality standards by 1979 and to regularly review and revise the plan thereafter. (§§ 40460, 40463, subd. (a).) The District's plan constitutes the "federally required state implementation plan for the South Coast Air Basin." (§ 40460, subd. (d).)

As originally enacted, section 40440 required the District to adopt rules and regulations by the end of 1977 "that are not in conflict with federal and state laws and rules and regulations and reflect the best available technology and administrative practices." (Stats 1976, ch. 324, § 5, p. 897.) In 1987, section 40440 was amended to provide in subdivision (b) that the "rules and regulations adopted pursuant to subdivision (a) shall . . . : [¶] (1) Require the use of *best available control technology* for new and modified sources and the use of *best available retrofit control technology* for existing sources." (Stats. 1987, ch. 1301, § 9, p. 4653, italics added.) The meaning of those terms, and particularly the latter term, is at the heart of this case.

In order to adopt, amend, or repeal a regulation, a district must hold at least one noticed public hearing. (§ 40725.) During such hearings, a district "shall provide for the submission of statements, arguments, or contentions, either oral, written, or both. . . . Following consideration of all relevant matter presented, a district board may adopt,

amend, or repeal a rule or regulation, unless the board makes changes in the text originally made available to the public that are so substantial as to significantly affect the meaning of the proposed rule or regulation.” (§ 40726.) Before adopting or amending a regulation, a district must make several findings, including a finding of “necessity.” (§ 40727, subd. (a).)

The statutory scheme also authorizes districts to grant variances under certain conditions when compliance with a regulation would “result in either (A) an arbitrary or unreasonable taking of property, or (B) the practical closing and elimination of a lawful business.” (§§ 42352, subd. (a)(2), 42368, subd. (a)(2).)

B.

The District regulates stationary sources of ozone. Ozone forms when volatile organic compounds (VOCs) react with oxides of nitrogen in the presence of sunlight. Ozone irritates the respiratory system, aggravates asthma, and leads to irreversible reductions in lung function. (See EPA, Air Quality Designations, 40 CFR § 81 (2004), 69 Fed. Reg. 23858, 23859 (Apr. 30, 2004); see also *Allied Local & Regional Mfrs. v. U.S. EPA* (D.C. Cir. 2000) 215 F.3d 61, 66, fn. 1.) These respiratory effects are particularly severe in children and the elderly. (See EPA, Air Quality Designations, 40 CFR § 81 (2004), 69 Fed. Reg. 23859 (Apr. 30, 2004); see also *Dunn-Edwards Corp. v. South Coast Air Quality Management Dist.* (1993) 19 Cal.App.4th 519, 522, fn. 2.)

The Basin has historically suffered, and continues to suffer, from the worst ozone pollution in the United States. (EPA, Latest Findings on National Air Quality: Status and Trends Through 2006 (2008) 8-10.) As a result, the Basin is in “extreme” nonattainment with state air quality standards for ozone and in “severe” nonattainment with the 1997 federal ozone standard. (EPA, Air Quality Designations, California-Ozone, 40 CFR § 81.305 (2004) 69 Fed. Reg. 23882-23883 (Apr. 30, 2004).) According to a recent study, the economic cost of the health impacts from ozone pollution in the Basin exceeds \$480 million annually. (Hall et al., The Benefits of

Meeting Federal Clean Air Standards in the South Coast and San Joaquin Valley Air Basins (Nov. 2008) pp. 76-80.)

The VOCs that cause ozone pollution come from many sources. In addition to motor vehicles, a significant source of VOCs is architectural coatings. According to a Board report in the record, these are coatings “applied to stationary structures and their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. To be classified as an architectural coating, a coating must be applied in the field, at the site of installation, rather than in a shop or factory where pollution control equipment may be installed. . . . [¶] Architectural coatings include, but are not limited to paints, varnishes, stains, industrial maintenance coatings, and traffic coatings.”

According to the District, “emissions from architectural coatings are greater than the emissions from the entire refinery community, the furniture manufacturing industry, printing industry[,] and aerospace industry combined, multiplied by a factor of two.” Architectural coatings are the single largest source of VOCs that the District can regulate. As of 2002, these coatings emitted approximately 58 tons of ozone per day in the Basin, an amount equal to what 1.7 million motor vehicles produce in a day. According to a Board report, VOC emissions from architectural coatings represent about 8 percent of stationary source VOC emissions statewide and 4 percent of total statewide emissions.

Architectural coatings consist of pigments that give paint its ability to hide the underlying surface, binders (or resins) that disperse pigment particles and bind pigments to the painted surface, solvents that keep paint in a liquid state during application, and chemical additives that are needed for other coating characteristics. Solvents are the primary source of VOCs in architectural coatings; VOCs are emitted when solvents evaporate during the drying process. The VOC content of a coating is generally expressed as grams of VOC per liter of coating.

Curtailing pollutants from architectural coatings is difficult because coatings typically are not applied within an enclosure vented to an air pollution control device. The principal cost-effective method to control VOC emissions from architectural coatings is to reduce their VOC content by reformulating coating products. In general, coating manufacturers will meet the VOC limits by replacing some of the solvents with water or other exempt compounds, or by increasing the amount of resins, pigments, or other solids. Because the substitution of water for solvents can lead to inferior performance by the coating, various additives or resins must be devised for waterborne coatings in order to upgrade their performance.

C.

The District's Rule 1113, originally enacted in 1977 and amended a number of times thereafter, limits concentrations of VOCs in architectural coatings. (See Rule 1113 (2007) p. 1.) Rule 1113 establishes VOC limits for coatings in 42 categories and prohibits the manufacture and use of noncompliant coatings, subject to certain qualifications.

The District's 1997 air quality management plan was in effect when it adopted the 2002 amendments to Rule 1113 at issue here (2002 Amendments). According to the 1997 plan, major reductions in VOC emissions are necessary to attain air quality standards for ozone and various particulates. A District staff report in the record observes that as emissions from facilities and vehicles decrease, "widespread area wide sources" such as architectural coatings become a greater proportion of VOC emissions and need to be reduced in order to make further progress toward reducing ozone pollution. The District estimated that if left unchecked, architectural coating emissions alone would account for more than 20 to 25 percent of allowed VOC emissions by 2010. The 1997 plan called for a 50 percent reduction in VOC emissions from coatings by 2010. After the plan's adoption, the Board and the EPA approved it. (See EPA, Approval and Promulgation of State Implementation Plans, Cal.-South Coast, 40 CFR

§ 52 (2000) 65 Fed. Reg. 18903 (Apr. 10, 2000).) These approvals made the plan binding on the District. (See *General Motors Corp. v. U.S.* (1990) 496 U.S. 530, 533-534.)

In 1999, the District amended Rule 1113 as part of its effort to implement the 1997 plan. The amendments established interim VOC limits for 11 categories of coatings, effective July 2002, with final limits effective July 2006. The amendments were adopted after industry input through various meetings and workshops. The District also received and responded to written public comments. Some of the comments came from public agencies, which claimed that coatings at the level prescribed by the regulation were not available or feasible. In response to these comments, the District proposed to modify the amendments to exempt what it termed “essential public services.” This proposal was submitted less than two weeks before the May 4, 1999 hearing where the amendments were adopted.

The Association challenged the regulation on substantive and procedural grounds. Without reaching the merits, the Court of Appeal held in an unpublished opinion that the District violated procedures set forth in sections 40725 and 40726 by adding the public agency exemption and other substantial changes to the proposed amendments without giving 30 days’ notice prior to the May 4, 1999 hearing. The Court of Appeal directed the trial court to issue a writ of mandate vacating the District’s adoption of the 1999 amendments.

But the amendments were never vacated. Before the writ could issue, the District largely readopted the 1999 amendments in December 2002, this time following the proper procedures and incorporating numerous revisions in response to a new round of comments by industry and others. The 2002 amendments — the subject of the present proceeding in this court — establish interim VOC limits that became effective January 1, 2003 (or July 1, 2004 for the industrial maintenance coatings category) and final limits

that became effective July 1, 2006. (Proposed Amendments to Rule 1113 (Dec. 6, 2003) 1113-10, 1113-11.)

In formulating the rule, the District concluded in several staff reports included in the record that compliant coatings were becoming increasingly available in all the categories affected by the amendments. While earlier versions of low-VOC water-borne coatings had shown problems with stability, rheology (flow characteristics), water immersion, loss of gloss, rusting, lack of corrosion resistance, loss of drying capacity, and bacterial degradation, new additives and resin emulsions developed in the 1990s upgraded the performance of water-borne coatings and significantly reduced or eliminated these problems.

The District's conclusion about the availability of high-performing, low-VOC coatings was based in part on a survey of product data sheets prepared by coatings manufacturers. The District also relied on several studies by outside consultants conducted under the supervision of a technical advisory committee formed by the District and comprised of representatives of the paint industry, academia, and regulatory bodies. In one study, non-flat top coatings, primers, sealers, undercoaters, and industrial maintenance coatings were tested and evaluated according to various performance criteria, such as drying time, application properties, corrosion resistance, and adhesion to substrates. The study showed that low-VOC and zero-VOC coatings equaled or surpassed high-VOC coatings on many performance characteristics.

The District had also contracted for a two-year, real-time exposure study of exterior coatings and coating systems. "At the end of the two-year outdoor test," the District reported, "the results continue to show that zero- and low-VOC coatings are similar in weathering and durability characteristics, and in many cases have outperformed their higher VOC-based counterparts, corroborating the conclusions reached by the laboratory weathering and accelerated outdoor weathering studies." In addition, the District had conducted surveys of construction sites and facilities, and found that across a

wide variety of applications, the vast majority of coatings used on these sites complied with the interim limits and that many coatings complied with the final limits.

In response to coating industry comments, the District acknowledged that “new products . . . will need to be formulated to comply with future lower VOC content limits. Industry input during development of the 1999 amendments to Rule 1113 indicated that research and development of new coatings where the resin technology is currently available takes approximately three to five years. Further, industry has indicated that if a resin technology is not currently available, research and development of new coatings takes approximately five to seven years. Based on this industry input, the final compliance dates specified in the 1999 amendments to Rule 1113 allowed at least seven years for the development of new products. Because the May 1999 amendments to Rule 1113 have already been in effect for more than three years, the expectation is that coating manufacturers have made progress in their research and development efforts of new formulations that comply with future VOC limits.” The District further stated that “based on current availability of low and zero-VOC . . . coatings for a wide range of applications, it is anticipated that even more complying coatings will be available by the 2003 and 2006 compliance dates.” The District relied in part on a 1997 study it had commissioned concluding that in light of “the published results and availability of low VOC resins, coatings, and processing capabilities, the industry should witness major progress over the next 5 to 7 years.”

The 2002 amendments to Rule 1113 also incorporated several measures designed to give manufacturers and users flexibility in achieving the rule’s VOC limits. These included a sell-through provision whereby any coating manufactured before the effective date of the applicable Rule 1113 limit with a VOC content above that limit (but not above the applicable limit on the date of manufacture) “may be sold, supplied, offered for sale, or applied for up to three years after the specified effective date.” (Rule 1113(c)(4).) The 2002 amendments also provided for an averaging compliance option for many coating

categories, whereby “manufacturers may average designated coatings such that their actual cumulative emissions from the averaged coatings are less than or equal to the cumulative emissions that would have been allowed under those limits over a compliance period not to exceed one year.” (Rule 1113(c)(6).)

Before adopting the 2002 amendments, the District received and responded to several critical comments, mostly from the coating industry. In some cases, industry comments caused the District to modify the amendments, for example, by delaying the effective date of the interim industrial maintenance coatings limits to July 1, 2004 and by creating additional coating categories with higher limits. On the other hand, the District disagreed with industry comments that low-VOC coatings in particular categories were inferior to high-VOC coatings with respect to various performance characteristics and that the District relied too heavily on product data sheets in determining whether the amended limits were feasible.

D.

In January 2003, the Association filed a petition for writ of mandate in Orange County Superior Court pursuant to Code of Civil Procedure section 1085 seeking to set aside the 2002 amendments. The petition claimed, among other things, that the new emissions limitations amounted to arbitrary and capricious rulemaking because they establish technically infeasible standards that would allegedly eliminate 90 percent of currently available coatings. The petition also alleged that the District violated the California Environmental Quality Act (CEQA) and that it violated sections 40440.8 and 4072.8.5 by inadequately analyzing the socioeconomic impact of the amendments.

The superior court bifurcated the case into a first phase addressing the District’s authority to adopt the rule and a second phase addressing other claims. In the first phase, the court examined the technological feasibility of the regulations and, after a trial, held that the rule was within the District’s authority. Before the trial court issued a decision in

the second phase, the Association dismissed the remainder of its claims. In its statement of decision in the first phase, the trial court rejected the Association's argument that the VOC limits were not achievable within the time limits provided. Thus, the court concluded, the 2002 amendments did not violate section 40440, subdivision (b)(1)'s requirement that emissions limits be based upon the "best available retrofit control technology." The trial court noted that substantial evidence supported the District's findings that numerous low-VOC coatings were already available, that low-VOC coating technology was improving, and that anticipated improvements would address industry concerns.

The Association appealed but did not seek a provisional stay of the rule. Accordingly, the interim limits were in effect from January 1, 2003 to July 1, 2006, and the final limits have been in effect since then.

The Court of Appeal reversed in part. As discussed in greater depth below, the court concluded that the statutory phrase "best available retrofit control technology" means technology that was commercially available or capable of being readily assembled when the 2002 amendments were promulgated. The Court of Appeal reasoned that because the record revealed no already compliant products in two categories, quick dry enamels and rust preventive coatings, the limits for those categories exceeded the District's authority. Rather than invalidate the regulations, the court remanded the matter to the superior court to determine whether then-current technology (i.e., as of 2009) was sufficient to comply with the District's 2006 final VOC limits.

The Court of Appeal rejected the Association's additional claim that "while compliant paints and coatings may exist in various categories, there is no evidence in the administrative record that [the] compliant paintings and coatings are suitable for all 'applications' or *uses* of those paints." Noting that the relevant statutes regulate "sources" rather than "applications," the court concluded that the District did not need to show that the 2002 limits could be met for all applications with each category.

We granted review.

II.

In issuing and amending Rule 1113, the District exercised its quasi-legislative power pursuant to statute to issue generally applicable regulations to achieve its own and the state's air pollution objectives. (See § 40440.) As we stated in *Yamaha Corp. of America v. State Bd. of Equalization* (1998) 19 Cal.4th 1, 10-11 (*Yamaha*), “quasi-legislative rules . . . represent[] an authentic form of substantive lawmaking: Within its jurisdiction, the agency has been delegated the Legislature's lawmaking power. [Citations.] Because agencies granted such substantive rulemaking power are truly ‘making law,’ their quasi-legislative rules have the dignity of statutes. When a court assesses the validity of such rules, the scope of its review is narrow. If satisfied that the rule in question lay within the lawmaking authority delegated by the Legislature, and that it is reasonably necessary to implement the purpose of the statute, judicial review is at an end.”

In assessing the validity of a quasi-legislative regulation in an action for mandamus under Code of Civil Procedure section 1085, “ ‘[o]ur inquiry necessarily is confined to the question whether the classification is “arbitrary, capricious, or [without] reasonable or rational basis.” [Citation.]’ ” (*Yamaha, supra*, 19 Cal.4th at p. 11.) Furthermore, “[u]nless otherwise provided by law, ‘the petitioner always bears the burden of proof in a mandate proceeding brought under Code of Civil Procedure section 1085.’ (*California Correctional Peace Officers Assn. v. State Personnel Bd.* (1995) 10 Cal.4th 1133, 1154.) Thus, it is petitioner's burden to establish that [the agency's] decision was arbitrary, capricious, entirely lacking in evidentiary support, unlawful, or procedurally unfair.” (*Khan v. Los Angeles City Employees' Retirement System* (2010) 187 Cal.App.4th 98, 106.) When inquiring into whether a regulation is arbitrary, capricious, or lacking in evidentiary support, the “ “ “ “ “court must ensure that an agency has adequately considered all relevant factors, and has demonstrated a rational connection

between those factors, the choice made, and the purposes of the enabling statute.” [Citation.]’ ” ’ ” (*Golden Drugs Co., Inc. v. Maxwell-Jolly* (2009) 179 Cal.App.4th 1455, 1466 (*Golden Drugs*)). Because we address the validity of the amendments as adopted in 2002, we consider only the administrative record before the agency at that time.

It is worth noting that “the question whether agency action is ‘entirely lacking in evidentiary support’ is not the same as a substantial evidence test.” (*Golden Drugs, supra*, 179 Cal.App.4th at pp. 1466; see also *Shappell Industries, Inc. v. Governing Board* (1991) 1 Cal.App.4th 218, 232.) The latter standard is generally used in reviewing administrative adjudications under Code of Civil Procedure section 1094.5. (See *Bixby v. Pierno* (1971) 4 Cal.3d 130, 143-144; see also *Brock v. Superior Court* (1952) 109 Cal.App.2d 594, 598-599 [examining Judicial Council Report that was the source of Code of Civil Procedure section 1094.5 to determine that it does not apply to quasi-legislative acts of administrative agencies.].) The arbitrary and capricious standard of review employed under Code of Civil Procedure section 1085 is more deferential to agency decisionmaking than the substantial evidence standard. (*State Bd. of Chiropractic Examiners v. Superior Court* (2009) 45 Cal.4th 963, 977.) Although both standards “ ‘require a *reasonable basis* for the decision’ ” (*Warmington Old Town Associates v. Tustin Unified School Dist.* (2002) 101 Cal.App.4th 840, 850, *italics in original*), they should not be conflated. We use substantial evidence review to examine administrative adjudications that apply general rules to a particular dispute in which evidence is presented and contested. We use the arbitrary and capricious standard to review quasi-legislative decisions resulting from an agency’s exercise of its statutorily delegated policymaking discretion. In the latter context, an agency adopts generally applicable rules through an administrative process in which “the demarcation between facts, reasoning, policy and discretion is quite vague.” (Childress & Davis, 3 Federal Standards of Review (4th ed. 2010) § 15.07, p. 15-44.)

When an agency is not exercising a discretionary rulemaking power but merely construing a controlling statute, “ ‘[t]he appropriate mode of review . . . is one in which the judiciary, although taking ultimate responsibility for the construction of the statute, accords great weight and respect to the administrative construction. [Citation.]’ [Citations.]” (*Yamaha, supra*, 19 Cal.4th at p. 12.) How much weight to accord an agency’s construction is “situational,” and greater weight may be appropriate when an agency has a “ ‘comparative interpretive advantage over the courts,’ ” as when “ ‘the legal text to be interpreted is technical, obscure, complex, open-ended, or entwined with issues of fact, policy, and discretion.’ ” (*Ibid.*, italics omitted.) Moreover, a court may find that “the Legislature has *delegated* the task of interpreting or elaborating on a statute to an administrative agency,” for example, when the Legislature “employs open-ended statutory language that an agency is authorized to apply or ‘when an issue of interpretation is heavily freighted with policy choices which the agency is empowered to make.’ ” (*Id.* at p. 17 (conc. opn. of Mosk, J.); see also *Moore v. California State Bd. of Accountancy* (1992) 2 Cal.4th 999, 1013-1014 [Board of Accountancy delegated with task of construing Business and Professions Code section 5058 forbidding use of titles “likely to be confused with” the titles of “certified public accountant” and “public accountant”].) In other words, the delegation of legislative authority to an administrative agency sometimes “includes the power to elaborate the meaning of key statutory terms.” (*Ramirez v. Yosemite Water Co.* (1999) 20 Cal.4th 785, 800.) Nevertheless, the proper interpretation of a statute is ultimately the court’s responsibility.

With these principles in mind, we turn to the issues at hand.

III.

We first address whether the statutory term “best available retrofit control technology” encompasses only technology that is readily available when a regulation is promulgated or instead encompasses technology that is projected to become available at some future date.

To address this issue, we begin with the relevant statutes. Section 40440, subdivision (b) provides that the rules and regulations the District adopts to implement its air quality management plan shall “[r]equire the use of best available control technology for new and modified sources and the use of best available retrofit control technology for existing sources.” These two statutory terms — “best available control technology” and “best available retrofit control technology” — lie at the core of the instant dispute. The two terms differ by only a single word. But despite their textual similarity, a careful examination of the statutory scheme reveals that they have significantly different meanings.

The term “best available control technology” (BACT) is defined in section 40405. Section 40405, which applies to new and modified sources of emissions, states: “(a) As used in this chapter, ‘best available control technology’ means an emission limitation that will achieve the lowest achievable emission rate for the source to which it is applied. . . . ‘[L]owest achievable emission rate,’ as used in this section, means the more stringent of the following: (1) The most stringent emission limitation that is contained in the state implementation plan for the particular class or category of source, unless the owner or operator of the source demonstrates that the limitation is not achievable. (2) The most stringent emission limitation that is achieved in practice by that class or category or source.” (Paragraphing omitted.)

The term “best available retrofit control technology” (BARCT) is defined in section 40406. Section 40406, which applies to existing sources of emissions, states: “As used in this chapter, ‘best available retrofit control technology’ means an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source.” The parties do not dispute that the architectural coatings at issue in this case are existing sources subject to the best available retrofit control technology standard.

Sections 40405 and 40406 define BACT and BARCT, respectively, in terms of an “achievable” emissions limitation or reduction, terms that do not describe any particular type of technology. Because these statutes define a technological standard, however, an “achievable” emissions limitation or reduction means one that is technologically achievable, taking into account the various impacts and factors specified in the statutes.

Importantly, the statutes define “best available control technology” and “best available retrofit control technology” differently. As noted, section 40405 defines BACT in terms of the “lowest *achievable* emission rate,” which in turn refers to an “emission limitation that is *achieved in practice*.” (§ 40405, subd. (a), italics added.) By contrast, section 40406 defines BARCT as an “emission limitation that is based on the maximum degree of reduction *achievable*, taking into account environmental, energy, and economic impacts by each class or category of source.” (§ 40406, italics added.) Section 40406 does not further specify that an “achievable” emissions reduction means a reduction that has been “achieved in practice.” “ ‘When the Legislature uses materially different language in statutory provisions addressing the same subject or related subjects, the normal inference is that the Legislature intended a difference in meaning.’ ” (*People ex rel. Lockyer v. R.J. Reynolds Tobacco* (2005) 37 Cal.4th 707, 717.)

Thus, section 40406, unlike section 40405, does not define what is “achievable” by reference to what is “achieved in practice” and does not otherwise define the term “achievable.” In common usage, “achievable” means “capable of being achieved.” (Webster’s New Internat. Dict. (3d ed. 2002) p. 16; 1 Oxford English Dict. (2d ed. 1989) p. 102.) Although the fact that a task has been achieved is obviously evidence that the task is “achievable,” the word is not limited to that meaning. “Achievable” also describes a potentiality to be fulfilled or a goal to be achieved at some future date. (See, e.g., *Toyota Sees 1991 Market Share 9.0 Percent*, ReutersNews (Sept. 24, 1990) [Toyota vice-president says goal of “selling 1.5 million cars and trucks in the U.S. by 1995” is “achievable”]; Stieghorst, *Caribbean Seeks U.S. Business; Business Leaders of Haiti*

Extoll Nation's Vigor, South Florida Sun-Sentinel (Nov. 23, 1986) 1986 WNLR 1450879, p. 2 [Haiti's goal of adding 50,000 jobs in 4 years "achievable but difficult"].) Here, the emissions limits set forth in the 2002 amendments (and originally promulgated in slightly different form in 1999) did not go into effect in final form until July 1, 2006. Thus, an emissions reduction that is "achievable" in this context is readily understood as a reduction that, from the vantage point of 1999 or 2002, was capable of being achieved by 2006. Contrary to its position in this court, the Association accepted this straightforward reading of the statute in the Court of Appeal below, acknowledging in its opening brief in that court that the District, in requiring the use of best available retrofit control technology, "may force companies to implement technology if there is a showing that implementation is achievable by the effective date" of the regulation.

Any doubts about the differences between the BACT and BARCT standards is dispelled by comparing two provisions of the 1995 amendments to the Lewis-Presley Act — section 40440.11 and section 40920.6 — both of which address the cost-effectiveness of air pollution regulations. (See Stats. 1995, ch. 837, §§ 2, 3, pp. 6374-6377.) Section 40440.11 instructs the District on how to assess cost-effectiveness when setting a BACT standard. Subdivision (c) of section 40440.11 provides that "[p]rior to revising the best available control technology guideline for a source category to establish an emission limit that is more stringent than the existing best available control technology guideline for that source category, the south coast district shall do all of the following: (1) Identify one or more potential control alternatives that may constitute the best available control technology, as defined in Section 40405. (2) Determine that the proposed emission limitation *has been met by production equipment, control equipment, or a process that is commercially available for sale, and has achieved the best available control technology in practice* on a comparable commercial operation for at least one year" or longer under certain circumstances. (3) Review the information developed to assess the cost-effectiveness of each potential control alternative. . . . (4) Calculate the incremental cost-

effectiveness for each potential control option. . . .” (Italics added, paragraphing omitted.)

Whereas section 40440.11 applies to BACT, section 40920.6 instructs districts on how to assess cost-effectiveness when setting a BARCT standard. Subdivision (a) of section 40920.6 provides that before adopting rules or regulations for best available retrofit control technology in a nonattainment area, “districts shall . . . (1) Identify one or more potential control options which achieves the emission reduction objectives for the regulation. (2) Review the information developed to assess the cost-effectiveness of the potential control option. . . . (3) Calculate the incremental cost-effectiveness for the potential control options identified in paragraph (1). . . .” (Paragraphing omitted.) Subdivision (b) provides that “[a] district may establish its own best available retrofit control technology requirement based upon consideration of the factors specified in subdivision (a) and Section 40406 if the requirement complies with” pertinent state and federal laws.

Like section 40440.11, section 40920.6 requires a district to “[c]alculate the incremental cost-effectiveness” of each potential control option. (Compare § 40440.11, subd. (c)(4) with § 40920.6, subd. (a)(3).) However, section 40920.6 has no provision comparable to 40440.11, subdivision (c)(2), which requires the District, as part of assessing the cost-effectiveness of a BACT standard, to “[d]etermine that the proposed emission limitation *has been met by production equipment, control equipment, or a process that is commercially available for sale, and has achieved the best available control technology in practice*” (Italics added.) Instead, section 40920.6 gives air pollution control districts considerable discretion in developing their own BARCT requirements and conspicuously refrains from limiting districts to what has already been achieved. As the concurrent enactment of section 40440.11, subdivision (c)(2) demonstrates, the Legislature knew how to write such a limitation when it enacted section 40920.6, but it chose not to do so.

Moreover, section 40920.6 appears in the chapter of the air pollution statutes that categorizes air quality districts according to the severity of their pollution and imposes more stringent requirements on districts according to that severity. The Legislature has mandated BARCT standards only for districts in serious, severe, or extreme nonattainment of state air quality standards. (See 2 Manaster & Selmi, *supra*, § 40.25[3], pp. 40-39, 40-40; §§ 40919, subd. (a)(3), 40920, 40920.5; see also § 40918, subd. (a) [requiring BARCT for moderate nonattainment districts under certain conditions].) In so doing, the Legislature recognized that such districts must set emissions limits not only for new or modified sources but also for existing sources of air pollution in order to meet state standards. Moreover, by authorizing districts to establish their own BARCT requirements (instead of a uniform state-imposed requirement), section 40920.6 enables districts with more serious air quality problems to require greater control efforts from existing sources. As noted earlier, the District is in extreme nonattainment with the state's air quality standards for ozone. (See *ante*, at p. 5.) Under section 40920.6, the District has discretion to determine the stringency of the BARCT standard in order to meet environmental and public health goals imposed by state and federal law, as long as the District reasonably considers the various factors prescribed by the BARCT statutes.

BARCT is therefore a technology-forcing standard designed to compel the development of new technologies to meet public health goals. The technology-forcing character of BARCT reflects the long-standing approach of federal air pollution control legislation. As the high court has observed, the landmark 1970 amendments to the Clean Air Act, which first set national air pollution standards, “were a drastic remedy to what was perceived as a serious and otherwise uncheckable problem of air pollution. The Amendments place the primary responsibility for formulating pollution control strategies on the States, but nonetheless subject the States to strict minimum compliance requirements. These requirements are of a ‘technology-forcing character,’ [citation], and are expressly designed to force regulated sources to develop pollution control devices that

might at the time appear to be economically or technologically infeasible.” (*Union Electric Co. v. EPA* (1976) 427 U.S. 246, 256-257.)

A standard that is technology-forcing need not ignore considerations of practicality. Section 40406 provides an apt example; it defines BARCT as an “emission limitation that is based on the maximum degree of reduction achievable, *taking into account environmental, energy, and economic impacts* by each class or category of source.” (Italics added.) But the principle of technology-forcing is based on the premise that because pollution is a negative externality, industry generally has insufficient incentive to develop or adopt new pollution control technology in the absence of regulation. (See *Sherwin-Williams Co. v. South Coast Air Quality Management Dist.*, *supra*, 86 Cal.App.4th at p. 1280 “[A]ppellants cannot convince us that, left to itself, industry will take steps to safeguard the public health and public welfare by using less polluting but possibly more expensive technology.”); Fields & Fields, *Environmental Economics: An Introduction* (3d ed. 2002) 72-75 [unregulated markets generally do not provide adequate incentives to constrain external pollution costs]; Esty, *Revitalizing Environmental Federalism* (1996) 95 Mich. L.Rev. 570, 575-597 [same].)

BARCT’s technology-forcing character is also consistent with the legislative history behind the enactment of the BARCT standard. As one committee report stated: “In recent months, [the South Coast Air Quality Management District] has come under severe criticism from federal, state and local officials for not taking sufficient action to control and reduce air pollution. This bill is intended to encourage more aggressive improvements in air quality and to give the District new authority to implement such improvements.” (See Sen. Rules Com., Ofc. of Sen. Floor Analyses, 3d reading analysis of Sen. Bill No. 151 (1987-1988 Reg. Sess.) as amended Aug. 20, 1987, p. 4.) The BARCT standard was therefore part of a legislative enactment designed to augment rather than restrain the District’s regulatory power.

The Court of Appeal rejected the District’s position that the BARCT standard was technology-forcing, concluding that “best available retrofit control technology” refers only to technology that is currently available in its final form or capable of being readily assembled. In so concluding, the court relied on the language of statutes governing the use of “best available control technology” by new sources, despite the clear statutory differentiation between BACT and BARCT. In particular, the Court of Appeal cited section 40723, enacted in 2000 (Stats 2000, ch. 501, § 1), which provides in subdivision (b): “Upon the request of any owner or operator of equipment that is subject to best available control technology or lowest achievable emission rate requirements, the district shall review whether the applicable requirements have been achieved and whether the requirements should be required for the source category or source” While acknowledging that section 40723 applies to BACT and not to BARCT, the court reasoned that “[i]t would be highly anomalous for the Legislature to build in a protection for the operators of equipment subject to rules governing new sources of pollution, namely that the operator could request review as to whether the requirements had been ‘achieved’ — past tense — if the Legislature intended that rules governing *existing* sources of pollution could be based on technology *beyond* state of the art. If anything, one would expect the reverse: If the Legislature wanted to give the district authority to make rules requiring *something beyond* state of the art technology, it would presumably want to give that authority first as regards any *new* sources of pollution, where, after all, the most recent ‘conceivable’ technologies would be more likely to be devised, then attempted.”

The District argues convincingly, however, that it would not be anomalous for the Legislature to have established more rigorous standards for existing sources than for new or modified sources. As the District points out, BACT determinations are made as part of the District’s construction permit program; they are decided on a case-by-case basis for new and modified pollution sources. Under District rule No. 1303(a)(1), “[t]he Executive

Officer or designee shall deny the Permit to Construct for any relocation or for any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless BACT is employed for the new or relocated source or for the actual modification to an existing source.” (See 2 Manaster & Selmi, *supra*, § 41.25[4], pp. 41-52 to 41-56; *Security Environmental Systems, Inc. v. South Coast Air Quality Management Dist.* (1991) 229 Cal.App.3d 110, 115-116, 121 [noting that BACT determination is part of the process for obtaining permits to construct hazardous waste incinerator].) “Best available control technology” is limited to extant technology because BACT is a standard that defines what technology must be used when industry seeks permission for imminent new construction. BARCT standards, by contrast, are generally applicable rules that require full compliance at some future date, usually several years after a rule is adopted. (See 2 Manaster & Selmi, *supra*, § 41.20[2][d], p. 41-26.) BARCT standards are designed to achieve emission reductions by existing sources over a period of time, during which it is reasonable for a standard-setting district to predict and require ongoing innovation in pollution control technology. These differing regulatory contexts and timeframes illuminate why the Legislature made BARCT standards more forward-looking than BACT standards.

Noting that the federal Clean Air Act imposes national standards on emissions from new and modified sources but not on emissions from existing sources (see 42 U.S.C. §§ 7475, 7502(c)(5), 7503; 40 C.F.R. § 51.160-166 (2011)), the Association contends that Congress, and by implication our Legislature as well, intended to impose more stringent standards on new and modified sources, and that BARCT therefore must be no more technology-forcing than BACT. As the District points out, however, the decision to set national standards for new source pollution was an effort to prevent states from engaging in a “race to the bottom” by lowering new source standards to attract industry. (H.R. Rep. No. 95-294, 1st Sess. p. 184 (1977), reprinted in 1977 U.S. Code Cong. & Admin. News pp. 1077, 1263.) On the other hand, Congress decided to delegate

to the states the task of regulating existing sources, so that more stringent existing source standards would apply in more polluted areas of the country. (*Id.* at p. 1263, fn. 3.) California’s statutory scheme mirrors the federal scheme in imposing BARCT requirements only in nonattainment districts and in allowing districts with more severe pollution problems to impose more stringent BARCT requirements. (See *ante*, at pp. 19-20.)

The Court of Appeal also concluded that section 40703 supports the position that BARCT calls for “existing, as distinct from conceivable, technology.” Section 40703 provides: “In adopting any regulation, the district shall consider, pursuant to Section 40922, and make available to the public, its findings related to the cost effectiveness of a control measure, as well as the basis for the findings and the considerations involved. A district shall make reasonable efforts, to the extent feasible within existing budget constraints, to make specific reference to the direct costs expected to be incurred by regulated parties, including businesses and individuals.” The Court of Appeal reasoned that “[c]ost effectiveness is a factor which necessarily demands the hard data (‘direct costs’) associated with existing technology. *Conceivable* technology that is only ‘likely’ to meet a regulatory requirement given a hypothesized trend line is generally not amenable to clear-eyed cost accounting.”

But the Court of Appeal posited a false dichotomy between “existing technology” and merely “conceivable technology.” Regulatory agencies often have to make predictions about technological progress in setting environmental regulations, and such predictions are “‘subject to the restraints of reasonableness.’” (*Natural Resources Defense Council, Inc. v. EPA* (D.C. Cir. 1981) 655 F.2d 318, 328; see *id.* at 329 [upholding regulations limiting diesel vehicle emissions of particulate matter on the ground that the EPA’s “determination . . . of the likely sequence of further technological development” within the regulatory timeframe was reasonable].) We find no basis to conclude that reasonably predictable technological advances are not amenable to cost

analysis. In the present case, for example, the District engaged in such analysis using cost estimates from resin suppliers and coating manufacturers. Although coating manufacturers were reluctant to provide cost data, the District estimated on the basis of the information available, including a number of studies by coatings manufacturers and industrial users, that “the proposed limits would result in price increases for future coatings compliant with the interim limits to increase by up to 10% and those compliant with the final limits to increase by up to 20%. These price increases reflect not only any increased raw material costs but also other manufacturing costs to be recouped by the coatings manufacturers, such as research and development (R&D), testing, marketing, labeling, etc.” In addition, consistent with section 40703’s instruction “to make specific reference to the direct costs expected to be incurred by regulated parties, including businesses and individuals,” the District estimated the specific costs of the proposed limits to paint contractors, consumers, small businesses, and small paint manufacturers. Moreover, as section 40920.6 directs, the District calculated cost effectiveness in terms of “the cost, in dollars, of the potential control option divided by emission reduction potential, in tons, of the potential control option” (§ 40902.6, subd. (a)(2)) and estimated total cost-effectiveness to be “\$13,317 per ton” over the years 2002 to 2015. Although the Association asserts that “it seems difficult, if not outright impossible, for the District to be able to determine the cost effectiveness of unavailable technology,” the Association has not challenged or alleged any shortcoming in the District’s cost analysis of the 2002 amendments to Rule 1113.

Finally, even if there were ambiguity in the statutory scheme, we would “ ‘accord[] great weight and respect to the administrative construction’ ” because here “ ‘the legal text to be interpreted is technical, . . . complex, open-ended, [and] entwined with issues of fact, policy, and discretion.’ ” (*Yamaha, supra*, 19 Cal.4th at p. 12.) This is an area where “ ‘the agency has expertise and technical knowledge.’ ” (*Ibid.*)

Accordingly, were we in doubt as to the correct interpretation of the BARCT requirement, we would defer to the District's reasonable construction.

In sum, we conclude that "best available retrofit control technology" is not limited to technology that already exists at the time a regulation is promulgated. BARCT also encompasses potential or developing technology that will enable compliance with emissions limits by the effective date of the regulation. Under section 40406 and related statutes, air pollution control districts may take continuing technological progress into account in determining what emissions reductions are "achievable" when setting BARCT standards to meet their public health goals.

In light of this holding, we express no view on the District's additional argument that BARCT sets only a floor and not a ceiling on the District's regulatory authority.

IV.

Because the District has properly construed its statutory authority to set BARCT standards, we will not vacate the 2002 amendments to Rule 1113 unless they are arbitrary, capricious, or entirely lacking in evidentiary support. Here, the Court of Appeal concluded that there was no evidence in the record of any compliant low-VOC coatings in two categories — quick dry enamels and rust preventive coatings — and remanded the matter to the superior court to determine whether any then-current (2009) technology enabled manufacturers to comply with the 2006 emissions limits.

As the District observes, the Court of Appeal appears to have misread the record when it concluded that no compliant quick dry enamels or rust preventive coatings existed when the 2002 amendments were adopted. Although the Court of Appeal did not specify the source for its conclusion, it was apparently relying on a table summarizing a 1998 study by the Board that showed zero available compliant coatings for quick dry enamels and rust preventive coatings. However, footnotes (d) and (f) to this table indicate that numerous coatings meeting the definition of quick dry enamels and rust preventive coatings were not included in those categories and instead appear in

alternative categories. The District staff report on the original 1999 amendments affirmed that “[o]ver the past 5 years, several coating manufacturers have developed and marketed acrylic formulations that achieve the high gloss and dry time requirements to be classified as quick dry enamels.” The report further states that District staff “has conducted extensive searches for rust preventative primers and topcoats that meet the proposed VOC limits . . . [and] has found numerous manufacturers that have direct-to-metal . . . finishes” that meet the low-VOC limits. The record also shows that there were additional coatings compliant with either interim or final limits when the 2002 amendments were adopted.

Furthermore, the Court of Appeal erred insofar as it discounted the relevance of anticipated technological progress that would produce more compliant coatings by 2006. The appearance of additional compliant coatings in these two categories between 1999 and 2002 underscores the District’s findings, based on a number of sources discussed above, that then-recent breakthroughs in resin technology and other coating technologies made possible further low-VOC product innovation in numerous coating categories. Moreover, the District relied in part on the industry’s own assessment to find that development of new products within the seven-year window provided by the Rule 1113 amendments was feasible. The Association does not explain why innovations within this time period for quick dry enamels and rust preventive coatings were beyond the capacity of its members. On a proper interpretation of the BARCT standard, the District was entitled to take into account evidence of reasonably foreseeable technological innovation in setting emissions limits for these categories of coatings.

Given the record evidence of then-current as well as reasonably foreseeable technology when the District adopted the challenged emissions limits for quick dry enamels and rust preventive coatings in 2002, the District’s determination that those limits were achievable is not arbitrary, capricious, or entirely lacking in evidentiary

support. We therefore conclude that the Court of Appeal erred in remanding that portion of Rule 1113.

V.

Finally, we turn to the issue the Association raised in the lower courts and in its answer to the petition for review: “Where an emissions limitation promulgated by the air pollution control district applies to a category of products, and where the record demonstrates that the limit is not achievable with available technology for all products within the category, has the district complied with the requirement to utilize best available retrofit control technology?”

The Association contends that the categories used by the District to set emissions limits are impermissibly broad: “The breadth of the regulatory categories in Rule 1113 results in the fact that technology for certain ‘classes’ or ‘categories’ of coatings may not be available to meet a proposed emissions standard, even though others within the regulatory category are available. For example, it may not be possible to develop a chemical storage tank coating that will perform acceptably at an emission level proposed for industrial maintenance coatings, but there is technology to develop a bridge coating at that level. In this case, section 40406 requires a finding that the technology is not available for the chemical storage tank coating subcategory, even though it is available for the bridge coating. These coatings should not be subject to the same standard simply because the District has placed the two coatings in the same ‘industrial maintenance’ category for regulatory purposes. Clearly, chemical storage tank coatings and bridge coatings are not the same ‘class or category of source.’ ”

In federal litigation, the Association similarly argued that section 40406 requires the District “to adopt control measures that are technologically feasible for all applications within a regulated category (e.g. stains).” (*National Paint & Coatings Assn., Inc. v. South Coast Air Quality Dist.* (C.D. Cal. 2007) 485 F.Supp.2d 1153, 1157 (*National Paint*).) Finding that argument “untenable,” the court explained: “First, the

‘application by application’ interpretation runs contrary to the plain meaning of § 40406. . . . BARCT is defined as an emission limitation ‘based on the maximum degree of reduction achievable *for each class or category of source.*’ § 40406 (emphasis added). The Oxford English Dictionary defines class . . . as ‘a number of individuals (persons or things) possessing common attributes, and grouped together under a general or ‘class’ name; a kind, sort, division.’ (2d ed. 1989). Similarly, the term category is defined as ‘a class, or division, in any general scheme of classification.’ *Id.* Thus, the plain meaning of the statute suggests that a BARCT control measure need only be shown achievable for a group or division *of* applications.

“Moreover, [the District’s] argument that [the Association’s] proffered feasibility standard would be ‘effectively . . . impossible to meet’ is persuasive. [The District] contends that, under the [Association’s] interpretation, [the District] ‘would have to demonstrate for all its air pollution-reduction rules feasibility for every conceivable application.’ . . . [A]n interpretation of BARCT that would undermine [the District’s] rule-making authority to such an extent is inconsistent with legislative intent.” (*National Paint, supra*, 485 F.Supp.2d at pp. 1157-1158, fns. omitted.)

For the reasons stated by the federal district court, we agree that an “application by application” construction of section 40406 is unworkable and not what the Legislature could have intended. (See *Western Oil & Gas Ass’n v. Air Resources Board* (1984) 37 Cal.3d 502, 524 [rejecting construction of a statute that would paralyze the agency by imposing an enormous regulatory burden].)

Before this court, the Association disavows a strict application-by-application construction of BARCT, stating that it “never suggested the burden is on the District to define every possible subcategory of coatings subject to the proposed rule based on every conceivable object to which the coatings might be applied. [The Association’s] position has been, and remains, that when a district proposes a rule that requires the use of technology across a broad and heterogeneous category of products and substantial

evidence shows that the technology is not available for discrete classes or categories within the regulatory category, the district needs to adjust the technology requirement for those subcategories in which the technology is available and the standard is achievable.” The Association notes that as of 1998 only a small percentage of coatings in some categories met Rule 1113’s final 2006 limits — for example, only 3 percent of non-flat coatings and 11 percent of industrial maintenance coatings. Based on these data, the Association contends that many products within each category have distinct functions and applications, and that the compliance of a small percentage of coatings within a given category does not demonstrate overall achievability within that category.

The Association analogizes its rule — that a district needs to readjust its categories “if substantial evidence shows that the technology is not available for discrete classes or categories within the regulatory category” — to the “fair argument” standard used in CEQA. Under CEQA, an environmental impact report (EIR) must be prepared “whenever it can be fairly argued on the basis of substantial evidence that [a] project may have significant environmental impact.” (*No-Oil v. City of Los Angeles* (1974) 13 Cal.3d 68, 75; see also *Friends of “B” Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 1002.) We adopted this low threshold to ensure the effectiveness of the statutory scheme because “the preparation of an EIR is the key to environmental protection under CEQA.” (*No-Oil, supra*, at p. 75.)

The Association does not explain how its proposed rule similarly advances the objectives of the statute here. Such a rule might be plausible if the primary purpose of BARCT were to rein in overzealous air pollution control districts, but as discussed above (see *ante*, at p. 21), section 40406 had the contrary purpose of requiring districts to pursue more aggressive regulation. Nor does the Association identify any basis for its rule in the language of the statute or in settled principles of administrative law. Indeed, the burden in this mandate proceeding is not on the District to show that no other categorization of pollution sources is supported by substantial evidence. Rather, the burden is on the

Association to show that the District's categorization of pollution sources is arbitrary, capricious, or entirely lacking in evidentiary support. (See *California Correctional Peace Officers Assn. v. State Personnel Bd.*, *supra*, 10 Cal.4th at p. 1154.)

The Association cannot carry this burden merely by observing, based on 1998 data, that only a small percentage of products in some categories complied with the 2006 emissions limits. As explained above (see *ante*, at pp. 20-23), the District need not consider only existing technology in determining whether an emissions reduction is achievable; it may also take into account reasonably foreseeable technological advances. The record shows that with the development of new additives and resins that improve the performance of many zero-VOC and low-VOC coatings, significant technological advances since the 1990s have affected numerous coatings and coating categories. Additional evidence in the record suggests that the process of reformulating a product and bringing it to market takes five to seven years. The District concluded that during the seven years between the time Rule 1113 was initially amended in 1999 and the time the 2006 limits were scheduled to go into final effect, many new products within each category would be developed. In addition, the District expected the coating industry to continue developing low-VOC products even as it was litigating the validity of the regulations.

The Association does not explain why the District's determinations were unreasonable, nor does it explain why reformulating the coatings in some definable category or subcategory of products posed obstacles so insurmountable that the task could not be accomplished within the regulation's timeframe. Moreover, in addition to reasonably contemplating technological advances, Rule 1113 does not require every source in a given category to meet the final emissions limits. The rule includes an averaging provision that deems manufacturers in compliance as long as "their actual cumulative emissions from the averaged coatings are less than or equal to the cumulative emissions that would have been allowed under those limits over a compliance period not

to exceed one year.” (Rule 1113 (c)(6).) Faced with devising a manageable number of categories to limit the VOC content of a vast number of coating products, the District reasonably built flexibility into its regulatory system to compensate for the rigidity that may result from overinclusive classifications.

In comments submitted to the District, some niche manufacturers claimed that the 2002 amendments would drive them out of the Southern California market because their narrow product lines make them unable to take advantage of the averaging provision and because they cannot reformulate their products quickly enough to meet compliance deadlines. We do not know whether those claims have borne out in reality. But nothing in section 40440 or section 40406 requires the District to determine that *all* manufacturers will be able to meet the standards by the compliance deadline. Indeed, as an additional measure of flexibility, the statute allows businesses facing closure as a result of air pollution regulations to apply for a variance. (See §§ 42350-42372.) According to the District, no manufacturer has yet applied for a variance based on inability to comply with the 2002 amendments.

Ultimately, although the Association vigorously contends that different categories would be preferable, it does not explain why the categories chosen by the District are arbitrary, capricious, or irrational. The District’s categories resemble those used by the Board in its model coatings rule, with the exception of various specialty categories that the District found unnecessary. In addition, the District followed section 40726’s directives that air pollution control districts must “provide for the submission of statements, arguments, or contentions, either oral, written, or both” before adopting or amending a regulation, and that districts may adopt or amend a regulation only after “consideration of all relevant matter presented.” The record abundantly demonstrates that the District carefully considered the industry’s concerns about improper categories.

The District’s response to written comments by the Sherwin-Williams Company illustrates such consideration. Sherwin-Williams commented: “We believe additional

categories will be needed to meet the specific performance properties required and to minimize the VOC content of each mini-category. For example, the industrial maintenance category might be divided into the following categories covering separate limits: coating for highway and bridges; chemical plant; paper and pulp mill; masonry structures; a merchant service; food and beverage facilities; petrochemicals; etc. The non-flat category might be divided between interior and exterior and different gloss levels. Such divisions will allow the maximum VOC reduction while maintaining some of the needed performance characteristics.” The District responded: “[District] staff believes that there are sufficient data and technology available to support the future limits. The [District] has repeatedly revisited specific evidence to justify creating additional subcategories of coatings with high VOC limits. When such evidence has been presented and is persuasive, the [District] has allowed such substitutions. The commentator failed to provide any supporting data to justify why currently available low-VOC coatings would not adequately perform for all the suggested mini categories.”

Industry comments and District responses elsewhere in the record bear out the conclusion that the District considered industry suggestions regarding additional subcategories, sometimes accepting and other times rejecting them. For example, in response to comments from the Henry Company, the District acknowledged that it “has been unable to identify other Bituminous Roof Primers that exhibit equivalent performance characteristics to their higher-VOC counterparts” and agreed with the company’s suggestion to create a category for bituminous roof primers with a VOC limit of 350 grams per liter. The record also reveals that the District created a number of other coatings in response to industry comments, including a zinc-rich industrial maintenance primer category, a generalized waterproofing sealer category, and a rust preventative coating category.

On the other hand, the District rejected requests for an anti-graffiti coating subcategory at a higher VOC limit based on its assessment of available products that

could meet proposed limits. It also decided against creating a separate chemical storage tank coating category, noting that the state model coatings rule did not have such a category, and instead delayed by one and a half years the effective date for the interim limit applicable to the industrial maintenance category (which includes chemical storage tank coatings) out of concern for the problems facing that category of coatings.

As the record shows, the District categorized pollution sources on the basis of its expertise as a specialized regulatory agency. The Association does not and cannot claim that there is an objectively correct categorization that the District should have adopted. We will not disturb the District's judgment simply because there is evidence, even substantial evidence, supporting a different categorization. To be sure, the District may not arbitrarily categorize existing sources of pollution in order to evade the statutory directive that an emissions limitation must be technologically achievable. But we will not invalidate the District's categories merely because of technical disagreements over their proper boundaries.

At bottom, the disagreement between the Association and the District over the categorization scheme is a disagreement over how strict air pollution limits should be and how long industry should have to achieve them. The Association repeats in this court what it argued in its comments to the District: that there was inadequate information about supposedly compliant products, that the District relied too much on product data sheets and not enough upon testing in the field, and that the District overstated the breakthroughs in low-VOC coatings technology. In response, the District affirms the reliability of industry-generated documents and points to the extensive field and laboratory testing it undertook. Nothing in the record indicates that the District ignored industry concerns or otherwise adopted the 2002 amendments to Rule 1113 arbitrarily, capriciously, or without evidentiary support. Accordingly, there is no basis for this court to second-guess the District's reasonable determinations.

None of the cases cited by the Association persuades us otherwise. The Association relies on *National Lime Assn. v. EPA* (D.C. Cir. 1980) 627 F.2d 416 (*National Lime*), which involved a challenge to regulations for newly constructed or modified lime manufacturing plants. Such regulations, mandated by section 111 of the Clean Water Act (42 U.S.C. § 7411), were known as new source performance standards. (See *National Lime*, at pp. 425-428.) Section 111 required the EPA Administrator to prescribe standards of performance for new emissions sources that reflect “ ‘the degree of emission limitation and the percentage reduction achievable through the application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, any nonair quality health and environmental impact and energy requirements), the Administrator determines has been adequately demonstrated’ ” (*Id.* at p. 428, quoting 42 U.S.C. § 7411(a) (Supp. I 1977).)

The *National Lime* court remanded the regulations to the agency, finding the EPA’s analysis supporting new source performance standards for the lime industry to be inadequate. According to the court, the EPA’s own analysis had identified several variables in lime production that could affect the volume and type of pollution emitted and, in turn, the efficacy of any pollution control measures. But the EPA’s analysis of six supposedly representative plants did not include sufficient discussion of those variables, making it impossible to determine whether the emission control results from the six plants adequately demonstrated that the proposed standards were achievable for the industry as a whole. (See *National Lime*, *supra*, 627 F.2d at pp. 431-433.) “The Agency’s failure to consider the representativeness along various relevant parameters of the data relied upon is the primary reason for our remand.” (*Id.* at p. 433.)

National Lime is distinguishable from the present case in two respects. First, *National Lime* involved an emissions standard for new and modified sources that required pollution control technology whose pollution reduction capability “ ‘has been adequately

demonstrated.’ ” (*National Lime, supra*, 627 F.2d at p. 428, quoting 42 U.S.C. § 7411(a) (Supp. I 1977).) Although such a standard is similar to the BACT requirement that the District must apply to new and modified sources, it is not similar to the BARCT requirement applicable to existing sources. Second, whereas *National Lime* invalidated a quasi-legislative regulation because of a methodological deficiency in the agency’s analysis (see also *Shappell Industries, Inc. v. Governing Board, supra*, 1 Cal.App.4th at pp. 236-237 [invalidating fees imposed by school district because of methodological flaws in the district’s analysis]), the Association identifies no such deficiency in this case. The Association does not contend that the District acknowledged certain variables to be important but then failed to analyze them. Instead, the Association simply disagrees with the District’s substantive determinations.

The Association cites several cases involving the federal Occupational Health and Safety Administration (OSHA), but they too are inapposite. As an initial matter, those cases were decided under a different standard of review whereby courts “ ‘must take a “harder look” at OSHA’s action than we would if we were reviewing the action under the more deferential arbitrary and capricious standard applicable to agencies governed by the Administrative Procedure Act.’ ” (*AFL-CIO v. OSHA* (11th Cir. 1992) 965 F.2d 962, 970.) OSHA must adopt standards that are technologically feasible, and it has the burden of demonstrating feasibility by means of substantial evidence. (See *id.* at p. 980.) Moreover, in two of the cases cited by the Association, the court remanded the regulations because OSHA had violated the well-established rule that the feasibility of its regulations must be determined industry-by-industry rather than generically. (See *id.* at pp. 980-982; *Color Pigments Mfrs. Assn. v. OSHA* (11th Cir. 1994) 16 F.3d 1157, 1161-1163.) No comparable error occurred in the present case.

In the third OSHA case cited by the Association, the court found that OSHA “ha[d] not presented substantial evidence of the technological feasibility of the [lead] standard for shipbuilders.” (*United Steelworkers of America, etc. v. Marshall* (D.C. Cir.

1980) 647 F.2d 1189, 1297.) In addition to applying more stringent review than the arbitrary-and-capricious standard, the court reached its conclusion in part because OSHA had given shipbuilders only one year to comply with its new standards. (See *ibid.*) The court explained that “where [OSHA] has given the industry ample time to devise means to meet the final [permissible exposure limit (PEL)], we have given a generous meaning to the philosophy of technology-forcing. Here, however, OSHA has given the shipbuilders only one year from the effective date of the standard to meet the final PEL. We thus cannot grant OSHA much margin for error in its speculations about technological development, because OSHA has given the shipbuilders virtually no time for such development.” (*Ibid.*) In the present case, the District reasonably calibrated its projections of technological development to the timeframe for complying with the regulation. (See *ante*, at pp. 11, 33.)

The Association also cites *Commonwealth Edison Co. v. Pollution Control Bd.* (Ill. App. 1974) 323 N.E.2d 84, 95, affirmed in part and reversed in part on other grounds (Ill. 1976) 343 N.E.2d 459, in which the court remanded a sulfur regulation for power plants on the ground that the state pollution control board provided insufficient information on the technological feasibility of the regulation. But that holding has apparently been overruled by *Granite City Division of Nat. Steel Co. v. Pollution Control Bd.* (Ill. 1993) 613 N.E.2d 719, 733-734, in which the Illinois Supreme Court held that the statutory mandate that the state board “ ‘take into account’ ” the “ ‘technical feasibility’ ” of pollution control regulations did not bar the board from adopting a technology-forcing regulation that was not technically feasible at the time of adoption if “ ‘absolutely necessary to protect the public.’ ” *Commonwealth Edison* is also distinguishable from the present case insofar as the state board apparently admitted it had insufficient information to gauge the feasibility of its sulfur regulations. (*Commonwealth Edison, supra*, at p. 95.)

In sum, the District extensively analyzed the architectural coating industry in all its variety. It examined industry concerns with its coating categories, and where appropriate, it adjusted those categories. Moreover, the seven-year period from the initial 1999 promulgation of the VOC limits to the 2006 effective date gave industry significant lead time for technological innovation. The Association disagrees with the District's expert technical judgments concerning source categories, achievable emissions limits, and appropriate testing protocols. These disagreements do not establish that the District's regulations were arbitrary, capricious, or entirely lacking in evidentiary support.

CONCLUSION

We conclude that the Association's challenges to the 2002 amendments to Rule 1113 are without merit. We reverse in part the judgment of the Court of Appeal and remand with directions to affirm the judgment of the trial court denying the Association's petition for a writ of mandate.

LIU, J.

WE CONCUR: CANTIL-SAKAUYE, C. J.
KENNARD, J.
BAXTER, J.
WERDEGAR, J.
CHIN, J.
CORRIGAN, J.

See next page for addresses and telephone numbers for counsel who argued in Supreme Court.

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