FOR PUBLICATION

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

GRAY DAVIS, Governor, of the STATE OF CALIFORNIA and the CALIFORNIA AIR RESOURCES BOARD, *Petitioner,* SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT; CHEVRON U.S.A., INC.; WESTERN STATES PETROLEUM ASSOCIATION, *Petitioner-Intervenor,* v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *Respondent,* NATIONAL CORN GROWERS ASSOCIATION; RENEWABLE FUELS ASSOCIATION, *Respondent-Intervenor.*	No. 01-71356 EPA No. EPA 420-S-01-008 ORDER AND AMENDED OPINION

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

Argued and Submitted
February 12, 2003—San Francisco, California

Filed July 17, 2003
Amended October 30, 2003

Before: William C. Canby, Jr., Diarmuid F. O'Scannlain, and William A. Fletcher, Circuit Judges.

Opinion by Judge Canby;
Partial Concurrence and Partial Dissent by Judge O'Scannlain

COUNSEL

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Michael E. Ward, Swindler, Berlin, Shereff, Friedman, L.L.P., Washington, D.C., for the respondents-intervenors.

ORDER

The opinion filed in this case on July 17, 2003, and reported at 336 F.3d 965, is hereby amended as follows:

The final sentence and citation in the section entitled "Standing," 336 F.3d at 970 (Beginning "In addition . . ." and ending ". . . (4th Cir. 2002)") is deleted.

With that amendment, Judges Canby and W. Fletcher have voted to deny the petition for panel rehearing, and Judge O'Scannlain has voted to grant the petition.

The petition for panel rehearing is denied.

OPINION

CANBY, Circuit Judge:

California Governor Gray Davis and the California Air Resources Board ("CARB") (collectively "California") petition for review of an order of the United States Environmental Protection Agency ("EPA") denying their request for a waiver of the oxygen level requirement under the federal reformulated gasoline program. The EPA denied the waiver on the ground that California had not clearly demonstrated that a waiver would have a beneficial effect on ozone pollution, and ruled that it was unnecessary to consider the effect a waiver would have on particulate matter pollution. We conclude that the EPA abused its discretion in refusing to consider and weigh the effect of the proposed waiver on particulate matter pollution along with its effect on ozone levels. We accordingly grant the petition for review, vacate the EPA's order, and remand for further proceedings. We reject, however, California's other technical and procedural challenges to the EPA's action.

FACTS AND AGENCY PROCEEDINGS

The Clean Air Act

The Clean Air Act, 42 U.S.C. §§ 7401-7671q, authorizes the EPA to set attainment standards (National Ambient Air

Quality Standards, or "NAAQS") for several air pollutants, including ozone, carbon monoxide and particulate matter. *See* 42 U.S.C. § 7409. Each state is required to adopt an implementation plan to meet the NAAQS for each air quality control region within the state. *See* 42 U.S.C. § 7410.

In 1990, Congress established the reformulated gasoline ("RFG") program as part of its amendments to the Clean Air Act. The statutory scheme requires the use of only RFG in certain high smog-ozone areas designated as non-attainment areas for NAAQS. *See* 42 U.S.C. § 7545(k). As part of its program, Congress mandated that RFG contain at least two percent oxygen by weight. *See* 42 U.S.C. § 7545(k)(2)(B). The primary choices of oxygenates to add to RFG to reach the two percent oxygen level are ethanol and methyl tertiary butyl ether ("MTBE"). The Clean Air Act authorizes the Administrator of the EPA to waive the oxygen content requirement if the Administrator determines "that compliance with such requirement would prevent or interfere with the attainment by the area of a national primary ambient air quality standard." 42 U.S.C. § 7545(k)(2)(B).

California's RFG Waiver Request

After determining that seepage and other discharge of MTBE was threatening public drinking water supplies, California banned MTBE effective December 31, 2002. Approximately seventy percent of the state's gasoline, however, is subject to federal RFG standards. As a result of California's decision to ban MTBE, refiners faced the prospect of oxygenating approximately ten billion gallons of gasoline a year using ethanol in order to comply with the federal two percent oxygen requirement.

Studies by CARB revealed that using ethanol as the substitute oxygenate in California gasoline would have detrimental economic and environmental impacts on the state. California refiners would require 75,000 barrels of ethanol per day, out

of the 80,000 barrels per day produced in the United States. In addition, CARB's studies suggested that maintaining the two percent oxygen mandate using ethanol would prevent or interfere with California's attainment of the federal ozone and particulate matter ("PM") NAAQS.

On the strength of these studies, Governor Davis wrote to the EPA in April 1999, requesting a waiver of the oxygen requirement pursuant to § 7545(k)(2)(B). Davis explained that California's Phase 3 reformulated gasoline ("CaRFG3") can be blended to meet air emission reduction requirements without a mandatory oxygen content.[1] *Id*. Davis further asserted that "a waiver of the federal RFG oxygen mandate in California would be necessary to avoid increases of ozone-forming emissions in the state." *Id*.

Between April 1999 and December 2000, EPA officials reviewed the materials submitted in support of California's waiver request and asked for additional information. CARB submitted further materials to the EPA supporting the waiver request, explaining that "revised California rules accommodating a federal RFG requirement for 2.0% wt. oxygen in the fuel year-round will necessarily be less effective in reducing vehicle emissions than would be the case if the rules could be based on oxygen-content flexibility." The data supplied by CARB demonstrated that a grant of the waiver request would result in 1.5% reduction of nitrogen oxides ("NOx") for CaRFG3, which translates to 2,920 tons of NOx reduction annually.[2] *Id.* If the two percent federal oxygen mandate were

[1]As the pioneer in motor vehicle emissions control, California is the only state permitted by the Clean Air Act to "prescribe and enforce, for the purpose of motor vehicle emission control, a control or prohibition respecting any fuel or fuel additive." 42 U.S.C. § 7545(c)(4)(B); *see Motor Vehicle Mfrs. Ass'n of the U.S., Inc. v. N.Y. State Dep't. of Envtl. Conservation*, 17 F.3d 521, 527 (2d Cir. 1994) ("California has a special exception from federal preemption allowing it to enact its own fuel requirements").

[2]NOx, carbon monoxide ("CO") and volatile organic compounds ("VOC") all influence ozone formation.

maintained, these NOx benefits would be lost. Because reductions in NOx emissions are part of California's implementation plan to attain the national ozone standard[3] and also are an important part of the state's efforts to attain the applicable NAAQS for PM, CARB advised the EPA that denial of the waiver request would undermine California's efforts to comply with federal clean air regulations.

The EPA's Response

On June 12, 2001, the EPA denied California's waiver request. In a letter addressed to Governor Davis, EPA Administrator Christine Todd Whitman stated that the agency had "carefully reviewed all the information and analysis submitted by California," and "performed [its] own comprehensive analysis to evaluate the possible emission effects of a waiver." The agency determined that it should not grant the waiver, "unless, at a minimum, it has been clearly demonstrated that granting a waiver would aid in attaining at least one NAAQS, and would not hinder attainment for any other NAAQS."

The EPA disagreed with CARB as to critical technical issues. It determined that granting the waiver would decrease NOx emissions, but would increase carbon monoxide ("CO") emissions. The EPA also determined there was substantial uncertainty relating to both the direction and the magnitude of changes in emissions of volatile organic compounds ("VOC"). This cloudy finding in turn created uncertainty whether the overall effect of a waiver would help or hinder ozone attainment. On the basis of all of the information before it, the EPA determined that California had not clearly shown what impact a waiver would have on achieving the ozone NAAQS for the affected areas. The EPA further concluded

[3]California's 1994 ozone state implementation plan demonstrated attainment in every federal non-attainment area by reducing both reactive organic gases and NOx emissions, a strategy reviewed and accepted by the EPA.

that "[s]ince we are denying California's request based upon uncertainty associated with the effect of a waiver on ozone, we need not decide whether the expected reduction in NOx from a waiver and the associated reduction in PM would support a determination of interference with the PM NAAQS."

California now petitions for review of the EPA's denial of its request for a waiver.[4] The South Coast Air Quality Management District ("SCAQMD") (the regional agency authorized under California law to coordinate air pollution control efforts for the South Coast Basin), Western States Petroleum Association, and Chevron, U.S.A., have intervened in support of California. The National Corn Growers Association and Renewable Fuels Association have intervened in support of the EPA. The National Petrochemical & Refiners Association, Natural Resources Defense Council, and the States of Maine, Massachusetts, New Hampshire, and New York have filed briefs as amici curiae.

We have jurisdiction pursuant to § 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1).

DISCUSSION

Standing

[1] As a preliminary matter, we reject the EPA's contention that California lacks standing to bring this appeal. The EPA claims that California is suing in a purely *parens patriae* capacity to protect California citizen interests. *See Alfred L. Snapp & Son, Inc. v. Puerto Rico ex rel., Barez*, 458 U.S. 592,

[4]Following the EPA's filing of the certified index to the administrative record, California filed a motion to supplement the record. The motion is granted with regard to the Report of the Blue Ribbon Panel on Oxygenates in Gasoline and the Blue Ribbon Panel Report entitled "Executive Summary and Recommendations," which were commissioned by EPA and referenced in California's waiver application. The motion is denied with regard to the remaining materials.

600 (1982) ("[I]f the State is only a nominal party without a real interest of its own—then it will not have standing under the *parens patriae* doctrine."). To the contrary, California faces remedial and proprietary consequences that depend upon the outcome of this litigation. If California fails to comply with its implementation plan requirements, it could be subject to various federal enforcement remedies. *See* 42 U.S.C. § 7413(a)(2). In addition, the State could lose millions of dollars in highway funds, 42 U.S.C. § 7509(b)(1), and could be required to offset emissions from new or expanded industrial facilities. *See* 42 U.S.C. § 7509(b)(2); *see also Sierra Club v. EPA*, 292 F.3d 895, 900 (D.C. Cir. 2002) (stating that petitioner has standing to challenge agency action when the petitioner is an "object of the [agency] action at issue") (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561-62 (1992)).

Merits

California challenges on several grounds the EPA's decision to deny the waiver. In addition, California contends that the EPA erred by denying the waiver without engaging in formal rulemaking. Finally, California argues that the EPA erred by failing to take into account California's exemption under the Clean Air Act authorizing it to regulate fuel standards without approval from the EPA. We consider each of these arguments in turn.

1. Whether the EPA abused its discretion in refusing California's request for a waiver of the oxygenate requirement under Clean Air Act § 211(k)(2)(B).

California alleges that the EPA abused its discretion in refusing California's waiver request because (1) the EPA relied on an erroneous evidentiary standard by requiring that California "clearly demonstrate" the effects that a waiver would have on a NAAQS; (2) California adequately demonstrated that a waiver was necessary to reduce NOx emissions

and to meet the ozone and PM NAAQS; and (3) the EPA refused to consider the impact of a waiver denial on California's ability to meet the PM NAAQS.

We review the EPA's "action, findings and conclusions" to determine whether they were "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

1A. The EPA did not rely on an erroneous evidentiary standard by requiring that California "clearly demonstrate" the effects that a waiver would have on a NAAQS.

Section 7545(k)(2)(B) of the Clean Air Act states that "the Administrator may waive, in whole or in part, [the oxygen requirement] for any ozone nonattainment area upon a determination by the Administrator that compliance with such requirement would prevent or interfere with the attainment by the area of a [NAAQS]." The EPA interpreted this provision as requiring that California "clearly demonstrate" the impact of a waiver for each applicable NAAQS. We conclude that the EPA's interpretation was a permissible one.

Because § 7545(k)(2)(B) is silent with respect to the evidentiary standard applied in review of a waiver application, we must determine "whether the agency's answer is based on a permissible construction of the statute." *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843 (1984).[5] We are not in a position to reject the EPA's interpre-

[5]California argues that *Chevron* deference is not appropriate in this case because the EPA did not engage in formal notice and comment rulemaking. *See Christensen v. Harris County*, 529 U.S. 576, 587 (2000) ("[I]nterpretations contained in policy statements, agency manuals, and enforcement guidelines, all of which lack the force of law—do not warrant Chevron-style deference."). The fact that the EPA reached its interpretation through means less formal than notice and comment rulemaking,

tation "unless it appears from the statute or its legislative history that the [agency decision] is not one that Congress would have sanctioned." *Id*. at 845 (citation omitted).

The EPA's interpretation of the evidentiary standard required by § 7545(k)(2)(B) is based upon Clean Air Act legislative history indicating that Congress wanted the EPA closely to scrutinize waiver requests. *See Alaska v. EPA*, 298 F.3d 814, 819-20 (9th Cir. 2002) (evaluating EPA's interpretation of the Clean Air Act in light of the Act's legislative history). During consideration of the 1990 Clean Air Act Amendments, Senator Simpson urged the EPA to "avoid a proliferation of too many different oxygen levels when it grants partial oxygen content waivers, to solve NOx cap or NAAQS problems under other provisions of § 211(k)." *See* 136 CONG. REC. §§ 3504, 3522 (1990), *reprinted in* COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, 103rd CONG., 4A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1990, at 1170 [hereinafter Legislative History]. The Conference Report indicated that "waiver of the oxygen requirements by petition must be the exception rather than the rule," and that waiver applicants should be required to "demonstrate that they are trying to comply with [the oxygen content] provision within their capabilities." *Id*. at 1024. In the light of this his-

however, does not automatically deprive that interpretation of the judicial deference otherwise due. *See Barnhart v. Walton*, 122 S. Ct. 1265, 1271 (2002). The deference afforded an agency depends in significant part upon the interpretive method used and the nature of the question at issue. *See id.* at 1272. In this case, "the interstitial nature of the legal question, the related expertise of the Agency, the importance of the question to administration of the statute, the complexity of that administration, and the careful consideration the Agency has given the question over a long period of time all indicate that *Chevron* provides the appropriate legal lens through which to view the legality of the Agency interpretation here at issue." *Id.* The mere fact that the EPA engaged in informal agency adjudication of California's waiver request does not vitiate the *Chevron* deference owed to the agency's interpretation of § 7545(k)(2)(B).

tory, it is not unreasonable for the EPA to insist on a standard that clearly establishes eligibility for a waiver.

California argues that the EPA should have shown more deference to California's waiver submission because Congress granted California authority to prescribe fuel additives for emission control, *see* 42 U.S.C. § 7545(c)(4)(B), and because the EPA in enforcing a different waiver provision, § 7543(b), merely looked to whether the State acted arbitrarily or capriciously.[6] California also relies on a past rulemaking in which the EPA approved California's Phase I and Phase II gasoline standards simply because the standards appeared to provide as great reductions of emissions as the comparable federal standards. 60 Fed. Reg. 43,379, 43,381 (Aug. 21, 1995). All of these examples, however, involve entirely different statutory provisions and are readily distinguishable from the present situation in which California seeks a waiver of a federal requirement that Congress created with California clearly in mind.[7]

[2] We read the statute's provision that the Administrator "may waive [the oxygen requirement]" as affording broad discretion to the EPA. In the light of that discretion, and because the EPA's interpretation is supported by the Clean Air Act's legislative history, we conclude that the EPA's interpretation of the evidentiary standard required by § 7545(k)(2)(B) is reasonable. That interpretation therefore prevails "whether or not there is another interpretation consistent—even more consistent—with the statute." *State of Hawaii ex. rel. Attorney Gen. v. FEMA*, 294 F.3d 1152, 1159 (9th Cir. 2002).

[6]Section 7543(b) expressly requires an "arbitrary and capricious" standard of review, *see* 42 U.S.C. § 7543(b)(1)(A), unlike the oxygen requirement waiver provision, which is silent on the subject. *See id.* § 7545(k)(2)(B).

[7]At the time the RFG program was created, it applied to only nine areas, including Los Angeles and San Diego. *See* 56 Fed. Reg. 31,176, 31,204 (July 9, 1991).

1B. California did not clearly demonstrate that a waiver was necessary to reduce NOx emissions to meet the ozone NAAQS.

The EPA denied California's waiver request because it concluded that "it [was] not clear whether the waiver sought by California will actually help to reduce ozone levels" and therefore that California had not met its burden of proof. California challenges the technical merits of the EPA's decision. In so doing, California is essentially asking this Court to reject the EPA's research on the effect of oxygenated fuel on California's ozone levels, in favor of the studies conducted by CARB. This we decline to do.

[3] We review the EPA's actions to determine whether they were "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); *see also Arizona v. Thomas*, 824 F.2d 745, 748 (9th Cir. 1987). Under this standard, we must engage in a substantial inquiry, but should not substitute our judgment for that of the agency. *See id.* (citations omitted). We must instead presume that the Administrator acted lawfully and so conclude unless our thorough inspection of the record yields no discernible rational basis for the agency's action. *See Motor & Equip. Mfrs. Ass'n, Inc. v. EPA*, 627 F.2d 1095, 1105 (D.C. Cir. 1979) (citation omitted). Moreover, "[d]eference is particularly great where EPA's decision is based on complex scientific or technical analysis." *Nat'l Petrochemical & Refiners Ass'n v. EPA*, 287 F.3d 1130, 1135 (D.C. Cir. 2002) (per curiam); *see also New York v. EPA*, 852 F.2d 574, 580 (D.C. Cir. 1988) ("[a]cceptance or rejection of a particular air pollution model and the results obtained from it are interpretations of scientific evidence" to which the court must reasonably defer). In the light of this deferential standard of review, we find that the EPA's decision that the waiver sought by California would not actually help reduce ozone levels was rationally based on the scientific evidence before it, and was neither arbitrary nor capricious.

The EPA concluded that the most sensible approach in evaluating California's waiver request was to analyze the combined effect of changes in NOx, CO, and VOC emissions, because they all influence ozone formation. The first step in the EPA's evaluation was "Refinery Modeling," which entails forecasting the likely properties of gasoline that refiners would produce with and without an oxygenate waiver. Refinery Modeling takes into account important variables such as gasoline input cost, octane levels, grade and price in order to predict the fuel properties of gasoline products sold by refiners. The analysis conducted by the EPA modeled several different scenarios, each representing different combinations of the variables.

The EPA then utilized the results of the Refinery Modeling to estimate the likely impact of a waiver on NOx, CO, and VOC emissions. The EPA performed Emissions Modeling to ascertain how the predicted fuel property changes from a waiver would affect emissions for each of the pollutants. In conducting this analysis, the agency evaluated each source of emissions (i.e., exhaust, evaporative, permeation, and commingling).

The EPA evaluated the impact of increased commingling on VOC emissions using an EPA model to estimate the likely range of Reid Vapor Pressure[8] ("RVP") increases due to commingling, and an equation derived from CARB's on-road emission inventory model to estimate the emission impacts resulting from various RVP changes. Commingling occurs when ethanol-oxygenated gasoline and gasoline without ethanol are mixed together in vehicle fuel tanks. The resulting mixture has a higher RVP than the average of the RVP's of the two original gasolines. This "RVP boost" increases evaporative VOC emissions. The EPA's research demonstrated that

[8]Reid Vapor Pressure is a measure of volatility. Specifically, it measures the surface pressure required to keep a liquid from vaporizing at a temperature of 100 degrees Fahrenheit.

granting California's waiver request would increase the incidence of commingling and commingling-related VOC emissions, because substantial amounts of both ethanol-oxygenated and non-oxygenated fuels would be sold in the same market. The EPA predicted that the commingling could reasonably result in a range of RVP boosts from 0.1 to 0.3 pounds per square inch ("psi"), leading to an increase in VOC emissions between 5.15 and 11.22 tons per day.

[4] Finally, after reviewing the analysis of the Refinery and Emissions Modeling, the EPA evaluated the effects that the predicted changes in emissions would have on ozone levels. The agency concluded that emissions of NOx were likely to decrease with a waiver, that CO emissions were likely to increase, and that there existed significant uncertainty over VOC emissions. Under the twelve likely refinery scenarios that the EPA forecast, the agency predicted that in all cases NOx would decrease and CO would increase; therefore, the biggest unknown was the change in VOC emissions. Because all three pollutants affect ozone to varying degrees, the agency was faced with having to speculate as to the effect the prediction emission changes would have on air quality. Because of the uncertainty in VOC emissions and the expected increase in CO, the EPA stated that it was unclear whether the waiver sought by California would actually help to reduce ozone levels. As a result, in its final analysis, the agency concluded that California had failed to demonstrate clearly that maintaining the federal oxygen requirement prevents or interferes with the State's ability to comply with the NAAQS for ozone. We conclude that this conclusion was rationally based on the scientific evidence before the EPA.

California challenges the EPA's analysis on three technical grounds. First, California claims that the EPA's analysis was flawed because it failed to consider the reduction in combined emissions of NOx and VOC resulting from a waiver. According to California, even assuming a "worst case" scenario of a net 0.2 psi RVP increase due to commingling, the combined

emissions of VOC and NOx decrease in all but two of the twelve likely refinery scenarios modeled by the EPA. The record reveals, however, that the EPA did consider the reduction in combined emissions of NOx and VOC resulting from a waiver, but found it unpersuasive. As the EPA explained, NOx, VOC and CO are not equivalent on a ton-for-ton basis in their effects on ozone. Furthermore, CO emissions increased under all of the refinery scenarios modeled. In many of the cases where VOCs might decrease, the EPA determined that the decrease (along with the decrease in NOx) would not be enough to offset the CO increase.

Second, California takes issue with the results of the EPA's commingling analysis. Studies by CARB concluded that the likely commingling RVP boost would be no higher than 0.1 psi. The EPA estimated an increase in RVP of about 0.2 psi, with a reasonable range anywhere between 0.1 psi and 0.3 psi. The record reveals that the EPA expanded on the research initially performed by CARB because it believed that the research by CARB was based on an overly-narrow and conservative set of assumptions. The EPA's analysis was based on several scenarios, including those relied upon by CARB, in order to address a range of likely effects. Although California's results may have been different from those reached by the EPA, we are not convinced that the EPA's comprehensive analysis was unreasonable. The technical analysis relating to commingling is complex and inherently difficult to forecast, and we therefore defer to the agency's findings.

Third, California argues that the EPA's RVP boost analysis is flawed because the agency failed to take into account adequately the fact that California reduced the RVP levels of its CaRFG3 gasoline by 0.1 psi to compensate for the effects of any increase in commingling due to the waiver. In its analysis, however, the EPA factored in a 0.1 psi reduction in recognition of California's adjusted RVP standard. Even after factoring in this reduction, the EPA's analysis shows a VOC increase due to the waiver for nine of the twelve likely refin-

ery scenarios. The EPA did not ignore the effects of California's new RVP standard, but concluded that it did not necessarily offset increases in VOC emissions from commingling.

The EPA's finding was supported by evidence in the record. Despite California's contentions, there is no basis for this court to set aside any element of the EPA's technical analysis. We conclude that the EPA did not act arbitrarily or capriciously in concluding that California had not met its burden of proving that the oxygen requirement interfered with the ozone NAAQS.

1C. The EPA abused its discretion by refusing to evaluate the effect that an oxygen waiver would have on California's efforts to comply with the PM NAAQS.

[5] Section 7545(k)(2)(B) provides that the Administrator may waive the two percent oxygen content requirement if compliance "prevent[s] or interfere[s] with the attainment by the area of a national primary ambient air quality standard." 42 U.S.C. § 7545(k)(2)(B). The EPA interpreted this provision to mean that a waiver request should be granted only when the petitioner has demonstrated that a waiver would aid in attaining at least one NAAQS and not hinder the attainment of any other relevant NAAQS. According to that interpretation, the EPA reasoned that "[s]ince we are denying California's request based upon uncertainty associated with the effect of a waiver on ozone, we need not decide whether the expected reduction in NOx from a waiver and the associated reduction in PM would support a determination of interference with the PM NAAQS." We agree with California that the EPA abused its discretion by refusing to consider the effect that an oxygen waiver would have on the PM NAAQS.

Congress did not specify how the EPA should resolve situations involving multiple NAAQS when a waiver could aid in attaining one NAAQS but could also impede compliance with

another. Because the Clean Air Act is silent with respect to this issue, "the question for the court is whether the agency's answer is based on a permissible construction of the statute." *Chevron*, 467 U.S. at 843. We cannot permit a construction of § 7545(k)(2)(B) which allows the EPA, in making its waiver determination, to ignore possible harm to a nonattainment area.

[6] To begin with, the EPA's interpretation of § 7545(k)(2)(B) prevents consideration of a factor that Congress stated was relevant to § 7545(k)(2)(B) waiver determinations: interference with the attainment of a NAAQS. CARB's research indicated that the maintenance of the oxygen requirement would keep NOx emissions up and thus would prevent or interfere with attainment of the PM NAAQS.[9] The EPA's models showed a decrease in NOx under all scenarios in which a waiver would be granted. The EPA admitted that "the consistent decreases in NOx emissions shown by our analysis also indicates that there would likely also be an overall decrease in nitrogen-containing PM emissions." By ignoring this evidence concerning the effects of a waiver on PM, the EPA refused to make the statutorily-directed determination whether denial of the State's waiver request would interfere with attainment of a NAAQS.

[7] The EPA argues that § 7545(k)(2)(B) does not require it to assess the effects of a waiver on *all* NAAQS whenever a waiver application is submitted. For purposes of this decision we do not dispute that point. In this case, however, the EPA was presented with research, both from CARB and the EPA itself, which demonstrated that the oxygen requirement interfered with the attainment of PM standards. Although § 7545(k)(2)(B) may not require the EPA to assess the impact on a NAAQS when there is no evidence relevant to that NAAQS submitted with an application, we conclude that it

[9]NOx is a precursor to PM and is the primary precursor to PM in the South Coast Air Basin. *See* 64 Fed. Reg. 1,770, 1,773 (Jan. 12, 1999).

does require the EPA to assess the impact on a NAAQS when the EPA has relevant evidence before it suggesting a threat to that NAAQS.

Under the EPA's interpretation of § 7545(k)(2)(B), a waiver that would have negative effects on attainment of one NAAQS must be denied, even if that same waiver would bring significant advancements toward attainment of another NAAQS. This logic stands at odds with the Clean Air Act's stated goal of "protect[ing] and enhanc[ing] the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." 42 U.S.C. § 7401(b)(1). It also undermines the sole purpose of the federal RFG program, which is to reduce air pollution. *See Am. Petroleum Inst. v. EPA*, 52 F.3d 1113, 1119 (D.C. Cir. 1995). In short, this interpretation of § 7545(k)(2)(B) not only ignores the clear words of the statute; it also misses the forest for the trees.

The EPA's current approach also cripples the goal of the Clean Air Act when, as in the current situation, the effects on one NAAQS are merely uncertain, not necessarily negative. Although California was unable clearly to demonstrate that the oxygen requirement would interfere with ozone standards, the EPA found no conclusive evidence that a waiver would be harmful to ozone. The effects of a waiver on ozone are uncertain at worst. The EPA nevertheless refused to consider the significance of the PM evidence. It adhered to this refusal even though the benefit of a waiver to the PM NAAQS could conceivably outweigh the uncertain effects of that waiver on ozone levels.

We recognize that modeling the effects on NOx, CO, and VOC from an oxygen waiver and predicting the resulting effects on air quality is a complex technical exercise, fraught with uncertainty. Even after careful research, the EPA's grant or denial of a waiver could prove to be the wrong decision for California's air quality. This uncertainty, however, further

bolsters the need for the EPA to evaluate all the possible outcomes suggested by the evidence before it. We cannot support an interpretation of § 7545(k)(2)(B) that permits the EPA to end its consideration of a waiver application as soon as it meets with evidence supporting an uncertain outcome with regard to one NAAQS, especially where evidence of a benefit to air quality with regard to another NAAQS is clearly present. For these reasons, we hold that the EPA abused its discretion by refusing to evaluate the effect that an oxygen waiver would have on California's efforts to comply with the PM NAAQS. We accordingly remand this case to the EPA with instructions to give full consideration to the effect of a waiver on both the ozone and PM NAAQS.

2. Whether the EPA erred by denying the waiver without engaging in formal rulemaking.

[8] California argues that the EPA was required by 42 U.S.C. §§ 7545(c) and §7607(d) to proceed by formal rulemaking, and that its failure to do so improperly precluded the opportunity for public comment and input. We agree with the EPA that California's contention is without merit.

[9] Nothing in § 7545(k)(2)(B) requires the EPA to determine whether to grant a waiver application by means of rulemaking. Absent express congressional direction to the contrary, agencies are free to choose their procedural mode of administration. *See, e.g., SEC v. Chenery Corp.*, 332 U.S. 194, 203 (1947) ("[T]he choice made between proceeding by general rule or by individual, ad hoc litigation is one that lies primarily in the informed discretion of the administrative agency."); *see also Pfaff v. HUD*, 88 F.3d 739, 747 (9th Cir. 1996) (recognizing, as an established principle of administrative law, that the choice between rulemaking and adjudication lies in the first instance within the agency's discretion). It is clear that Congress knew how to impose rulemaking requirements under the Clean Air Act when it wanted to do so. *See, e.g.*, 42 U.S.C. § 7545(a) ("The Administrator may by regula-

tion designate any fuel or fuel additive [for registration pursuant to § 7545(b)]"); 42 U.S.C. § 7545(k)(6)(B) (authorizing the agency to grant petition to delay the effective date of RFG opt-in areas "by rule"). It did not do so here.

California cites 42 U.S.C. §§ 7545(c) and 7607(d) for the proposition that Congress has directed the EPA to engage in formal rulemaking in this instance. Those statutory provisions are not applicable to agency decisions made pursuant to § 7545(k)(2)(B).

Section 7545(c)(1) provides that "[T]he Administrator may, . . . by regulation, control or prohibit the manufacture, introduction into commerce, offering for sale, or sale of any fuel or fuel additive . . . ." Section 7545(c)(2)(C) adds that the Administrator cannot prohibit a fuel unless "he finds, and publishes such finding, that in his judgment such prohibition will not cause the use of any other fuel . . . which will produce emissions which will endanger the public health . . . ." California argues that, because the EPA's denial of the waiver effectively prohibited the sale of oxygen-free fuel in California, §§ 7545(c) and 7545(c)(2)(B) required the EPA to act by regulation and publish its findings. This argument ignores the difference between the EPA's authority to impose fuel controls and its authority to decide whether to lift a requirement imposed by Congress. The Clean Air Act imposes the oxygen mandates on the states. Thus, it is Congress, not the EPA, which prohibits the sale of non-oxygenated fuel in California. The EPA's decision to deny a waiver of that requirement does not amount to a "prohibition" on the sale of non-oxygenated fuel.

Section 7607(d) requires notice and public comment prior to "the promulgation or revision of any regulation pertaining to any fuel or fuel additive under section 7545." *See* 42 U.S.C. §§ 7607(d)(3), 7607(d)(1)(E). Section 7607 does not apply in this case because the denial of a waiver under § 7545(k)(2)(B) does not constitute a "regulation" pertaining

to a fuel or fuel additive. As we have already explained, the EPA does not have authority to regulate two percent oxygenated fuel; it is merely given discretion whether to grant a waiver of Congress's oxygen mandate.

Congress did not require § 7545(k)(2)(B) waiver proceedings to be conducted as rulemakings. We accordingly find no error in the fact that the EPA did not publish a proposed denial of the waiver request before issuing its decision, nor in the fact that the EPA proceeded without a formal comment period.

3. Whether the EPA erred by failing to take into account California's exemption under the Clean Air Act authorizing California to regulate fuel standards without approval from the EPA.

As its final challenge to the EPA's action, California contends that it is exempt from federal preemption and free to regulate its own fuel requirements, thereby vitiating the need for EPA approval of CaRFG3. We review de novo questions of statutory interpretation. *See Harper v. U.S. Seafoods LP*, 278 F.3d 971, 973 (9th Cir. 2002).

California cites to § 7545(c)(4)(B) as support for its assertion that when California adopts its own fuel content regulations, those regulations control in lieu of competing federal RFG requirements. As we have already recognized,[10] § 7545(c)(4)(B) grants California the authority to establish state controls or prohibitions on fuel. This section, however, must be read in conjunction with § 7545(k)(2)(B), which requires all fuels in particular areas to meet the two percent oxygen requirement. *See, e.g., U.S. West Communications, Inc. v. Hamilton*, 224 F.3d 1049, 1053 (9th Cir. 2000) (stating that a court has a duty to harmonize two statutory provisions that are enacted at the same time and form the same part of

[10]*See* footnote 1, *supra*.

the same Act). We read these two provisions as permitting California to impose its own controls in addition to, rather than in lieu of, the federal oxygen mandate.[11]

The structure of § 7545(c)(4) makes it clear that the sole purpose of § 7545(c)(4)(B) is to waive for California the express preemption provision found in § 7545(c)(4)(A).[12] It was not intended to allow California, at its sole discretion, to relieve refiners of their obligations to comply with federal fuel requirements such as the RFG program under § 7545(k)(2)(B). Section 7545(k) contains no permission for California or any other state unilaterally to reject any of its provisions, and instead includes a provision, § 7545(k)(2)(B), that addresses requests for waiver of the federal oxygen requirement.

Intervernor SCAQMD's reliance on 42 U.S.C. § 7589 also is misguided. That section permits California to establish specifications for "clean alternative fuel" to be used in a federal pilot test program. SCAQMD argues that, because CaRFG3 is produced and distributed in California for this

[11]Congress expressly exempted certain states from some of the federal requirements contained in subsections of § 7545. *See, e.g.,* § 7545(h)(5) and § 7545(i)(4) (exempting Alaska and Hawaii from RVP and diesel fuel sulfur content requirements). The fact that Congress did not exempt any states from §7545(k)(2)(B) supports the EPA's interpretation of § 7545 in this case.

[12]Section 7545(c)(4)(A) states: "Except as otherwise provided in subparagraph (B) or (C), no State (or political subdivision thereof) may prescribe or attempt to enforce, for purposes of motor vehicle emission control, any control or prohibition respecting any characteristic or component of a fuel or fuel additive in a motor vehicle or motor vehicle engine — (i) if the Administrator has found that no control or prohibition of the characteristic or component of a fuel or fuel additive under paragraph (1) is necessary and has published his finding in the Federal Register, or (ii) if the Administrator has prescribed under paragraph (1) a control or prohibition applicable to such characteristic or component of a fuel or fuel additive, unless State prohibition or control is identical to the prohibition or control prescribed by the Administrator."

pilot program, California's CaRFG3 regulations replace the oxygen mandate of § 7545(k)(2)(B). We reject this contention.

Section 7589 establishes a limited pilot program in California designed to require the production, state-wide, of a certain minimum number of clean-fuel vehicles.[13] *See* 42 U.S.C. § 7589. Under the pilot program, California's role is to revise its implementation plan to establish clean fuel availability requirements, *see* 42 U.S.C. § 7589(c)(2), to ensure consumer access to fuels that will allow these vehicles to comply with the pilot program emission standards. There is nothing about the existence of this state obligation that could reasonably be interpreted to exclude refiners of California gasoline from their obligation to comply with other federal programs, such as the federal RFG program.

[10] Our reading of the Clean Air Act thus supports the EPA's conclusion that § 7545(k)(2)(B) applies to California. Although California is not preempted from issuing its own fuel additive requirements, it is not authorized to negate the requirements imposed by Congress.

CONCLUSION

We grant the petition for review, vacate the EPA's order, and remand the matter to the EPA with instructions to review California's waiver request with full consideration of the effects of a waiver on both the ozone and the PM NAAQS. We deny relief with respect to the remainder of California's claims.

[13]Clean-fuel vehicles, for purposes of the pilot program, are vehicles that are certified to comply with the EPA's pilot program emission standards using "clean alternative fuel." *See* 42 U.S.C. § 7581(2); 59 Fed. Reg. 50,042, 50,043 (Sept. 30, 1994). A "clean alternative fuel" is any fuel that a clean fuel vehicle uses to meet the vehicle standards, and may include federal RFG, as well as alternative fuels or power sources such as electricity. *See* 42 U.S.C. § 7581(2); *see also* 42 U.S.C. §§ 7581-7590.

PETITION FOR REVIEW GRANTED; VACATED and REMANDED.

O'SCANNLAIN, Circuit Judge, concurring in part and dissenting in part:

I agree that the United States Environmental Protection Agency's ("EPA's") interpretation of 42 U.S.C. § 7545(k)(2)(B) is afforded broad deference. As a result, I concur in Parts 1A, 1B, 2, and 3 of the majority's opinion, which hold that the EPA's extensive review of gasoline emissions data is neither arbitrary nor capricious, and that any disagreement that California has with the EPA's scientific analysis is simply insufficient to support its petition for review. I must dissent, however, from the majority's further conclusion in Part 1C that the agency's assessment of potential ozone effects, while failing to consider particulate matter ("PM") effects, somehow contravenes congressional intent.

In subsection (k)(2)(B), Congress imposed a 2.0 percent oxygen content requirement for gasoline used in prescribed high-smog zone areas of the country. In the case before us, the State of California sought an exemption from such requirement, claiming that without a waiver, it would be hard pressed to meet certain federal air quality standards. The Administrator denied the waiver request, concluding that California had failed to demonstrate adequately that the oxygenate requirement was inhibiting the State's efforts to comply with the federal attainment standard for ozone—a finding which the majority concedes was well supported by evidence in the record. Nevertheless, the majority orders a remand for further agency review, concluding that the Clean Air Act requires that the EPA consider the effects of a proposed waiver on PM. I respectfully disagree.

Congress adopted the oxygen requirement as part of the nationwide reformulated gasoline program ("RFG). In doing

so, it vested in the EPA the authority to waive the oxygen content requirement, but only, as subsection (k)(2)(B) provides, upon a "determination . . . that compliance with such requirement would prevent or interfere with the attainment by the area of a national primary ambient air quality standard." This statutory language limits waivers to circumstances in which the benefits to air quality can be clearly demonstrated. The EPA rightfully surmised that Congress did not authorize waivers when the purported benefits were speculative and uncertain. Accordingly, the EPA reasonably determined that it would grant waivers only if they would aid in attaining at least one standard, and would not hinder attainment for any other standard.

As the majority notes, subsection (k)(2)(B) is silent about how the EPA should rule when a proposed waiver request could aid in attaining one standard, but impede compliance with another. Under *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984), when an agency presents a reasonable interpretation of an ambiguous statute, that interpretation "prevails whether or not there is not another interpretation consistent—even more consistent—with the statute." *State of Hawaii ex rel. Attorney General v. FEMA*, 294 F.3d 1152, 1159 (9th Cir. 2002). *See Chevron*, 467 U.S. at 844 ("[Courts] may not substitute their own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency.").

This is a classic case in which we are bound to give due deference to the EPA's statutory interpretation. Remarkably, in reviewing the agency's actions, the majority itself recognizes that modeling the effects on air quality "is a complex technical exercise, fraught with uncertainty." In light of the narrow statutory exception, it is perfectly reasonable for the EPA to resolve inherent ambiguities in forecasting air quality effects by requiring that the projected impact on a relevant standard—especially for an important air quality component

such as ozone[1] —be at least neutral, if not beneficial. Contrary to the majority's surmise, Congress never instructed the EPA to resolve uncertainties in emissions modeling by balancing harmful effects to one air quality standard with potential benefits to another. By forcing the EPA to engage in such a speculative enterprise in an area far beyond judicial expertise, I am afraid that our holding today has impermissibly encroached upon the agency's discretion.

Accordingly, I would affirm the EPA's order in full and deny California's petition for review.

[1]Indeed, the agency's position is that, "Given the salience of ozone NAAQS attainment to Congress in enacting and structuring the oxygen mandate, EPA would have considered impacts on the ozone NAAQS even if California had only presented purported evidence of interference with the PM NAAQS." Brief for Respondents at 65 n.37.