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SURROGATE SCIENCE AND JUDICIAL DEFERENCE TO
AGENCY FINDINGS: HOW THE NINTH CIRCUIT KEEPS
EXEMPTIONS FOR BIOENERGY ON TRACK IN
HELPING HAND TOOLS V. EPA

I. INTRODUCTION

The climate change debate is plainly not a source of political unity in the United States.¹ The questioned efficacy of proposed solutions to climate change evokes even greater stratification within partisan circles as a typical constituent's political alignment predictably demonstrates.² As a corollary, those at the far reaches of the political spectrum differ greatly as to their confidence in climate scientists, and interestingly, the pattern holds true across persons who claim to possess an elevated scientific understanding.³ This is not to say, however, that climate change solutions are necessarily implemented or abandoned according to the whims of the reigning party, as administrative procedures safeguard against uninformed policy-making by requiring some underlying rational basis.⁴ Proposed solutions that originate within the executive branch therefore rely upon scientific findings that corroborate viability and efficiency.⁵

The basic premise of one such solution for biomass-burning is simple—because plants act as a “carbon sink” through photosynthesis, proponents of this solution anticipate that through efficient

1. See generally Cary Funk & Brian Kennedy, *The Politics of Climate*, PEW RESEARCH CTR. (Oct. 4, 2016), <http://www.pewinternet.org/2016/10/04/the-politics-of-climate/> (examining Americans' diverging views of climate change science and energy policy, and underlying political affiliations that influence such opinions).

2. See *id.* (conveying aggregated opinions of 1,534 U.S. adults between May and June of 2016). While only 9% of conservative Republicans believe “climate change research reflects the best available evidence most of the time,” 55% of liberal Democrats do. *Id.*

3. See *id.* (noting diminished influence of scientific knowledge on opinions of climate change science based on political affiliation).

4. See 5 U.S.C. § 706(2) (1966) (setting forth “arbitrary” and “capricious” standard of review).

5. See generally Ernest M. Jones, *A Component Approach to Minimal Rationality Review of Agency Rulemaking*, 39 ADMIN. L. REV. 275, 281-82 (1987) (declaring threshold criteria necessary for proper and effective agency rulemaking). Scholars posit that rules satisfying the rationality requirement should consider “(1) the conception of the problem addressed by it, (2) the public values at stake in coping with that problem, (3) the alternatives selected by the rule, (4) the basis for predicting the efficacy of alternatives, and (5) the predictions of the effects of alternatives.” See *id.*

methods of cultivation (i.e. replacing cut-down trees immediately), combustion of biomass stocks may approach “carbon-neutrality,” where the total carbon dioxide absorbed exceeds the total carbon dioxide emitted.⁶ Still, the empirical evidence needed to convince both legislators and climate change scientists that emissions from biogenic sources are, in fact, carbon-neutral remains out of reach as the debate between industry supporters and academic detractors intensifies.⁷ In 2011, the Environmental Protection Agency (EPA) launched its own investigation to determine the most effective methods of accounting for biogenic carbon emissions, but has yet to make lasting, enforceable determinations as to whether biogenic power generation should be exempt from emissions regulation.⁸

When facing challenges to the EPA’s temporary determinations, public policy and ethics prohibit judges from “substitut[ing] their policy preferences for the preferences embodied in the agency’s rule.”⁹ The question that remains is what degree of deference must be afforded to interim or unofficial agency preferences not contained within a binding legal document.¹⁰ The inquiry considers not only safeguards against judicial activism, but courts’ duties to strike down unsubstantiated interpretations by agencies that are sometimes interwoven with political decisions.¹¹ This Note examines these political and judicial tensions through the lens of the Ninth Circuit’s decision in *Helping Hand Tools v. U.S. Environmental*

6. See Zachary Basu, *A Burning Question: Throw Wood on the Fire for 21st-Century Electricity?*, CNBC (Sept. 18, 2017), <https://www.cnbc.com/2017/09/15/biomass-and-climate-change-burning-wood-for-energy-in-21st-century.html> (describing forests’ ability to act as “carbon sinks”). While biomass energy resources traditionally include organic materials sourced from crops and woody plants, the term also refers to algae and combustible gasses harvested from landfills. See *Biomass Energy Basics*, NAT’L RENEWABLE ENERGY LAB., <https://www.nrel.gov/workingwithus/re-biomass.html> (last visited Feb. 17, 2018).

7. See Basu, *supra* note 6 (explaining difficulty in measuring benefits of biomass-burning over short period of time). Critics remain wary of efforts to “legislate scientific fact” where such facts are newly ascertained. *Id.* (quoting William Schlesinger, retired scientist and president of the Cary Institute of Ecosystem Studies).

8. *Id.* (noting EPA’s release of interim guidance for regional permitting authorities in lieu of hard evidence as to efficacy of biogenic power generation as an environmental control). For a further discussion regarding EPA’s Bioenergy BACT Guidance, see *infra* notes 80-105 and accompanying text.

9. See Jones, *supra* note 5, at 275 (describing judicial duties faced when applying minimal rationality).

10. For a further discussion of judicial deference to administrative documents, see *infra* notes 106-127 and accompanying text.

11. See Hillary H. Harnett, *New York v. U.S. Nuclear Regulatory Commission*, 37 HARV. ENVTL. L. REV. 589, 602-03 (2013) (discussing standard of review and hard look doctrines at issue).

Protection Agency (Helping Hand Tools).¹² Part II of this Note explains the events culminating in Petitioners' attack on the Environmental Appeals Board's decision.¹³ Part III captures the critical features of the statutory, regulatory, and judicial landscape.¹⁴ Part IV explains the rationale behind the court's decision in *Helping Hand Tools*, while Part V considers the merits of the court's holding in favor of the EPA.¹⁵ Lastly, Part VI explains the ramifications of the decision on both the EPA's implementation and other courts' review of similar environmental findings in the future.¹⁶

II. FACTS

In *Helping Hand Tools*, the Ninth Circuit addressed activists' challenge to a permit for construction of a biomass-burning facility that was granted without consideration of alternative emission control technologies.¹⁷ As noted by the court, the Ninth Circuit had not previously addressed the EPA's doctrine of "redefining the source," and no circuit had the occasion to examine the EPA's Best Available Control Technology (BACT) analysis in the context of biomass-burning.¹⁸

In 2010, Sierra Pacific Industries applied for a Clean Air Act Prevention of Significant Deterioration (PSD) permit to construct "a new cogeneration [energy] unit" at an existing biomass-burning facility in Anderson, California.¹⁹ By constructing the unit, Sierra Pacific intended to increase the facility's biomass-burning capacity

12. 848 F.3d 1185 (9th Cir. 2016) (addressing Petitioners' contention that EPA permitted construction and operation of new power plant in violation of Clean Air Act).

13. For a discussion of the relevant facts, procedure, and issues on appeal in *Helping Hand Tools*, see *infra* notes 17-36 and accompanying text.

14. For a discussion of the executive response following enactment of the Clean Air Act, see *infra* notes 37-105 and accompanying text.

15. For a discussion of the narrative analysis of the opinion in *Helping Hand Tools*, see *infra* notes 128-156 and accompanying text. For a critique of the Ninth Circuit's analysis, see *infra* notes 157-184 and accompanying text.

16. For a discussion of the examination of the potential consequences of the Ninth Circuit's decision, see *infra* notes 185-198 and accompanying text.

17. See *Helping Hand Tools v. U.S. Env'tl. Prot. Agency*, 848 F.3d 1185, 1194 (9th Cir. 2016) (explaining petitioners' primary contention following dismissal by Environmental Appeals Board).

18. *Id.* at 1189 (noting novelty of issues at hand).

19. See *id.*; see also *Statement of Basis and Ambient Air Quality Impact Report: Sierra Pacific Industries-Anderson PSD Permit Number SAC 12-01*, U.S. ENVTL. PROT. AGENCY, REGION IX, 1, 3-4 (2012) [hereinafter EPA, AAQIR], <https://www.regulations.gov/contentStreamer?documentId=EPA-R09-OAR-2012-0634-0003&contentType=pdf> (summarizing Sierra Pacific's project description).

from 60,000 bone-dry tons (BDT) to 219,000 BDT per year.²⁰ As fuel, Sierra Pacific sought to use 160,000 BDT of wood waste produced by an adjacent lumber mill while consuming additional wood transported from the company's other California facilities.²¹ The biomass fuel stocks to be consumed thus included mill wastes, biomass from forest-harvesting and forest-thinning operations, and agricultural and urban wood waste.²² Acknowledged by the court in its denial of the petition for review, the EPA and Sierra Pacific proposed restrictions that prevented Sierra Pacific from removing trees for the sole purpose of burning them.²³

As reported in the EPA's Statement of Basis and Ambient Air Quality Impact Report, the plant would serve two purposes as a cogeneration facility.²⁴ First, it would generate the steam necessary for Sierra Pacific's commercial lumber drying processes.²⁵ Second, it would produce electricity to power Sierra Pacific's local operations, with any excess diverted to a regional utility operator for sale on the public electrical grid.²⁶ While the facility would burn natural gas to assist with boiler startup, shutdown, and flame stabilization, Sierra Pacific's design limited the use of natural gas to no more than ten percent of the plant's total fuel consumption.²⁷ As required by federal regulation, the EPA accepted fifteen public comments on Sierra Pacific's draft application, twelve of which voiced disapproval.²⁸ In 2012, the EPA accepted Sierra Pacific's

20. *See id.* at 4 (describing Sierra Pacific's purpose for expanding capabilities of plant). A "bone dry ton" refers to an amount of biomass with weight equal to 2,000 pounds and a moisture content of zero percent. J.R. Shelly, *Woody Biomass Definitions and Conversion Factors*, U.C. DIV. OF AGRIC. & NAT. RES. (Dec. 6, 2007), http://ucanr.edu/sites/WoodyBiomass/newsletters/IG003_-_Woody_Biomass_Definitions_and_Conversions_Factors31510.pdf (detailing common biomass terminology and figures).

21. *See id.* (comparing existing cogeneration unit with larger proposed wood-fired boiler).

22. *See Helping Hand Tools*, 848 F.3d at 1200-01 (describing proposed fuel blends).

23. *See id.* (noting limitations of Sierra Pacific's usage of certain biomass fuel stocks).

24. *See* EPA, AAQIR *supra* note 19, at 4 (outlining twin aims of proposed construction of cogeneration unit at SPI Anderson location).

25. *Id.* (explaining importance of thermal power plant to Sierra Pacific's lumber operations).

26. *See id.* (noting that electricity generated by biomass-burning would exceed consumption at SPI Anderson facility).

27. *See Helping Hand Tools*, 848 F.3d at 1192 (expounding on Sierra Pacific's reasons for limiting usage of natural gas as stated in application for construction permit).

28. *Sierra Pacific Industries*, 16 E.A.D. 1, 32 (EAB 2013) (discussing EPA's determination that project had not generated significant public interest).

proposal and granted the construction permit while still requiring adoption of emission controls to curtail the release of non-greenhouse gas pollutants.²⁹

Pursuant to the Clean Air Act (CAA), several individuals petitioned for review of the EPA's decision to grant Sierra Pacific's permit.³⁰ They argued that the EPA's analysis conflicted with the CAA because it failed to consider BACT to curtail carbon dioxide emissions.³¹ Namely, the petitioners contested the applicant should have been required to weigh the practicability of using solar power as an add-on control technology rather than dismissing solar power outright.³² Furthermore, the petitioners asserted that Sierra Pacific should have been required to consider the benefits of using a greater amount of natural gas to fuel its facility.³³ In the alternative, they attacked the Bioenergy BACT Guidance promulgated by the EPA, which had led the government to consider biomass fuels themselves to be BACT.³⁴ Following partial remand by the Environmental Appeals Board (EAB) for the EPA's failure to hold a public hearing, two environmentalist groups, Helping Hand Tools and the Center for Biological Diversity, brought further demands for review of the final PSD construction permit to the Ninth Circuit.³⁵ Upholding the EPA's decision and finding that the EAB did not abuse its discretion, the Ninth Circuit denied the petition for review and declined to rehear the decision en banc.³⁶

29. See *Helping Hand Tools*, 848 F.3d at 1192 (detailing chronology of Sierra Pacific's PSD permit application).

30. See *Sierra Pacific Industries*, 16 E.A.D. at 1 (naming litigants who made appearance to contest validity of Sierra Pacific's PSD permit).

31. See *id.* at 49 (describing petitioners' arguments on appeal).

32. See *id.* (explaining petitioners' calls for modification of plant design to incorporate clean technology such as solar power).

33. *Id.* (detailing petitioners' claim that cap on usage of natural gas was insufficient for purposes of BACT).

34. See *id.* at 1199 (interpreting environmental advocates' secondary claim).

35. See *Helping Hand Tools*, 848 F.3d at 1193 (describing procedure following EAB's dismissal for lack of jurisdiction). Although the issuer may decline to hold a public hearing regarding a permitting decision, "the . . . issuer *must* hold a hearing whenever there is a 'significant degree of public interest' in the draft permit." See *Sierra Pacific Industries*, 16 E.A.D. at 29 (citing 40 § C.F.R. 124.12(a)(1)). The EAB determined that within such a sparsely populated region, the number of comments received by the permit issuer were enough such that Region Nine abused its discretion in finding that there was "little indication that the public at large was interested." See *id.* at 33 (reaching opposite conclusion that public was indeed interested in Sierra Pacific project).

36. See *Helping Hand Tools*, 848 F.3d at 1189, 1201 (noting that no judge on Ninth Circuit had requested vote for rehearing).

III. BACKGROUND

A. Statutory Backdrop for Regulation of Greenhouse Gas Emissions

A discussion of the regulatory landscape surrounding greenhouse gasses in the United States begins with the CAA.³⁷ Originally adopted in 1963, Congress passed the core provisions of the CAA for the declared purpose of “protect[ing] and enhanc[ing] the quality of the Nation’s air resources so as to promote the public health and welfare”³⁸ In 1977 and 1990, Congress amended the CAA to provide the executive branch with broad enforcement authority over stationary and mobile sources of air pollutants.³⁹ Congress adopted two permitting schemes: the Prevention of Significant Deterioration (PSD), and Title V procedures.⁴⁰ The PSD provisions stipulate that no “major emitting facility” may be constructed unless a permit has been issued following agency review, and the administrator has held a public hearing for “interested persons” to raise issues concerning the impact of the source and alternatives available to the applicant.⁴¹ Among other requirements within the mandated PSD permitting procedures, Congress stated that proposed facilities are “subject to the [B]est [A]vailable [C]ontrol [T]echnology for each [emitted] pollutant subject to regulation”⁴² The provisions thus compel operators to employ Best Available Control Technology (BACT) to minimize pollutant emissions from both new and modified sources where emissions substantially exceed previously observed levels.⁴³ In conjunction with the PSD provisions, sub-sections under Title V of the Act make unlawful the operation of major emitting facilities without similar permits.⁴⁴

37. See generally 42 U.S.C. §§ 7401 *et seq.* (1990) (providing statutory grant of power for regulation of atmospheric pollutants in accordance with contemporary public health concerns).

38. § 7401(b)(1) (articulating purpose of legislation).

39. See generally §§ 7470, 7525 (outlining goals of Prevention of Significant Deterioration of Air Quality and Motor Vehicle Emission and Fuel Standards provisions).

40. See generally §§ 7470, 7661a (outlining new requirements for stationary sources to be enforced by executive branch).

41. See § 7475(a)(1-2) (discussing statutory mandate for public hearing).

42. § 7475(a)(4) (promoting adoption of emerging emissions control technologies where national benefit may be realized) (emphasis added).

43. See § 7475(a)(3) (explaining emissions thresholds set forth by statute).

44. See generally § 7475 (discussing need for major emitting facilities to obtain permits); see also 7661a (defining “major source[s]” for which operation requires compliance with CAA amendments).

Congress further promulgated restrictions on pollutant sources in the face of controversy by requiring the EPA to implement vehicle emissions testing.⁴⁵ Until 2007, no binding construction of the term “pollutant” within the CAA supported the EPA’s regulation of greenhouse gasses; the Supreme Court in *Massachusetts v. U.S. Environmental Protection Agency (Massachusetts)*,⁴⁶ however, addressed this very issue.⁴⁷ In a landmark five-to-four decision, the Court determined that “air pollutant[s] . . . which may reasonably . . . endanger public health or welfare” could include greenhouse gasses under the “otherwise-unambiguous” statute if the EPA made the determination that greenhouse gasses did in fact pose such danger.⁴⁸

In the aftermath of *Massachusetts*, the EPA engaged in a comprehensive expansion of its rules governing acceptable emissions thresholds and formally adopted the view that the Act mandates regulation of pollutants released by any and all sources, including greenhouse gasses.⁴⁹ Taking notice, however, of the fact that the CAA’s permitting procedures triggered upon annual release of either 100 or 250 tons of pollutants, the Agency carved back the applicability of the PSD permitting program to greenhouse gas emissions by announcing its Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule⁵⁰ (Tailoring Rule).⁵¹ The rule purported to effect a “phase-in” process in the interest of

45. § 7521 (enabling vehicle emissions testing). Pursuant to subsection (a)(1), the “[a]dministrator shall . . . prescribe . . . standards applicable to the emission of any *air pollutant* from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” *Id.* (specifying pollutants within EPA’s purview) (emphasis added).

46. 549 U.S. 497 (2007).

47. *Id.* at 510-15 (reviewing claims on appeal from D.C. Circuit, which dismissed petitions for agency rulemaking filed in response to EPA’s refusal to regulate greenhouse gas emissions). An environmental organization filed suit against Massachusetts alleging that its failure to regulate carbon dioxide through tailpipe emissions inspections would contribute to an increase in global temperatures resulting in sea level rise, which posed an actual and imminent threat to Massachusetts and its residents. *See id.* at 510, 521-526.

48. *See id.* at 500-01 (quoting 42 U.S.C. § 7601(a)(1)) (articulating EPA’s authorization to regulate greenhouse gasses).

49. For a further discussion of agency action expanding air pollution controls, see *New Source Review Workshop Manual*, *infra* notes 58, 63 and accompanying text.

50. 75 Fed. Reg. 31,514, 31,516 (June 3, 2010) (codified at 40 C.F.R. pts. 51, 52, 70) (setting forth three-step plan for alleviating compliance woes of affected source operators).

51. *See id.* (seeking to reduce burden on administrative agencies). The EPA recognized that the triggering threshold of 100 or 250 tons per year (tpy) was a low bar for greenhouse gas emissions in comparison to emissions rates for conven-

conserving administrative resources by modifying statutory triggering thresholds to avoid sweeping numerous smaller sources, such as motor vehicles, under the Act's purview.⁵² Opponents of the Tailoring Rule, however, mounted a successful challenge in *Utility Air Regulatory Group v. U.S. Environmental Protection Agency*.⁵³ Justice Scalia's majority reigned-in the Agency's greenhouse gas regulations, recognizing that "[Massachusetts] did not hold that [the] EPA must always regulate greenhouse gases as [] 'air pollutant[s]' everywhere [the] term appears in the statute, but only that [the] EPA must 'ground its reasons for action or inaction in the statute,' rather than on 'reasoning divorced from the statutory text.'"⁵⁴ The Court held that greenhouse gas emissions alone do not force operators to comply with permitting procedures, yet the EPA could regulate sources already subject to PSD procedures due to their release of airborne pollutants other than greenhouse gasses.⁵⁵ Crucial to the Court's reasoning was the notion that "consistent usage" of the term air pollutant under the CAA "readily yields to context" and within the legislative scheme of the PSD and Title V permitting procedures, the EPA had room to distinguish greenhouse gasses from other pollutants.⁵⁶

B. The EPA's 1990 BACT Guidance

As defined by Congress, BACT is an analysis conducted on a "case-by-case basis, taking into account energy, environmental, and economic impacts and other costs . . .," and conditioning project approval upon implementation of appropriate technology as set

tional pollutants, and instead proposed a new triggering threshold for carbon dioxide "in a range between 10,000 and 25,000 tpy." *See id.* at 31,518.

52. *See id.* (scaling back extent of regulation to encompass only large sources intended to be covered under PSD and Title V enabling statutes).

53. 134 S. Ct. 2427 (2014) (avoiding crippling effects of sweeping CAA application). Challengers to the Tailoring Rule included the Chamber of Commerce of the United States of America, the American Farm Bureau Federation, the American Chemistry Council, and several states including Texas, Florida, Georgia, North Dakota and South Carolina. *Id.* at 2433 (listing petitioners and respondents).

54. *Id.* at 2440-41. (quoting *Massachusetts v. U.S. Env'tl. Prot. Agency*, 127 S. Ct. at 1438) (citation omitted). Although the Court's holding eliminated the construction that regulatory compliance is mandatory for all sources, the Court duly noted that, regardless, the vast majority of stationary sources nation-wide are already subject to PSD permitting procedures. *See id.* at 2449.

55. *See id.* (holding that EPA was within delegated powers to regulate greenhouse gasses).

56. *See id.* at 2432, 2441-42 (articulating court's partial holding in favor of EPA).

forth by the Administrator.⁵⁷ The EPA's New Source Review Workshop Draft Manual defines a five-step, top-down process by which a permitting authority determines whether the applicant seeks to employ the best available control technology in its design.⁵⁸ Most noteworthy is step one, in which the applicant must make a good-faith effort to "identify . . . all available control options . . . with a practical potential for application to the emissions unit and the regulated pollutant under evaluation."⁵⁹ In steps two and three, the EPA evaluates the feasibility of the control options and ranks each technically feasible solution according to expected emissions, economic, environmental, and energy impacts.⁶⁰ In step four, the applicant validates that the top-ranked control option is the best solution and provides justification for why collateral environmental impacts do not warrant implementation of an alternative.⁶¹ At step five, the EPA accepts the applicant's selection.⁶²

Although the EPA's BACT guidance was promulgated according to congressional intent that operators of pollutant emitting sources implement modern technology when feasible, the EPA has long supported that where "considering available control alternatives" would "redefine the design of the source," a full BACT analysis need not be undertaken.⁶³ The EPA's exception in such scenarios has led to a flurry of litigation and has received varying degrees of reception in appellate courts, culminating in the decision discussed in *Helping Hand Tools*.⁶⁴

In *Sierra Club v. U.S. Environmental Protection Agency* (*Sierra Club*),⁶⁵ the Seventh Circuit considered a petition for review of the permit in question in *Prairie State Generating Co. (Prairie State)*,⁶⁶ wherein the EAB determined that permit issuers are under no duty

57. See 42 U.S.C. § 7479(3) (1990) (outlining "best available control technology" standard for future delineation by administrative agencies).

58. See *New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Area Permitting* (Oct. 1990), U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/nsr/nsr-workshop-manual-draft-october-1990> [hereinafter *New Source Review Workshop Manual*] (describing agency draft guidance).

59. *Id.* at B.5, B.11 (articulating BACT step one) (internal quotations omitted).

60. *Id.* at B.6 (describing BACT steps two and three).

61. See *id.* at B.6, B.8-B.9 (setting out fourth step in BACT process).

62. See *id.* at B.9 (concluding BACT selection process).

63. See *New Source Review Workshop Manual*, *supra* note 58, at B.13 (announcing source redefinition exception).

64. See *Helping Hand Tools*, 848 F.3d 1185, 1190-91 (9th Cir. 2016) (describing novelty of biogenic fuel in context of BACT analysis).

65. 499 F.3d 653, 653 (7th Cir. 2007) (reviewing EAB's decision upholding permit for construction of power plant).

66. 13 E.A.D. 1 (EAB 2006).

to consider alternative control technologies on their own.⁶⁷ The EPA argued that where alternative technology would undermine a project's basic business purpose, those alternatives may be eliminated entirely at step one of the BACT analysis.⁶⁸ Holding in favor of the EPA, the Seventh Circuit acknowledged and rejected the concern that applicants seeking to build power generation facilities can circumvent PSD and Title V requirements by simply making a certain fuel source an inherent aspect of the facility's design.⁶⁹ Judge Posner deferred to the EPA's determination that considering all alternatives, clean fuels would be a "Sisyphean labor," but Judge Posner did acknowledge that the dividing line between control technologies and the facility's inherent design is now blurred.⁷⁰ While offering words of caution in approaching the "crucial question where control technology ends and a redesign of the 'proposed facility' begins," the court found it best to allow the EPA final word in light of limited statutory guidance.⁷¹

The EAB in *Desert Rock Energy Company*⁷² heard petitions for review of a PSD permit from the Navajo Nation and others, who challenged on grounds that the EPA failed to apply the proper standard when considering a source redefinition exception.⁷³ The

67. *See id.* at 26. In *Prairie State*, several public health advocates raised objections to the Illinois EPA's granting of a permit for construction of a coal-fueled power plant to be built at the mouth of a coal mine. *Id.* at 1 (detailing petitioners' claims). The coal to be extracted and subsequently burned at the generating plant had a relatively high-sulfur content and was therefore less clean than other types of coal that were only available from far-away sources. *See id.* (noting characteristics of alternative fuel source that would redefine scope of project). Petitioners requested the EPA require consideration of coal sources that were not co-located with the facility. *See id.* at 22 (explaining petitioners' argument on appeal). The Appeals Board did, however, restrain its ruling, adding that the "redefining the source" rationale should be used only to eliminate inherently lower-emitting processes, not add-on controls. *See id.* at 16 (concluding that agency guidance does not permit exclusion of add-on controls from BACT analysis).

68. *See Sierra Club v. U.S. Envtl. Prot. Agency*, 499 F.3d 653, 654 (pointing to source-redefinition exception as accepted in prior decisions and guidance documentation).

69. *See id.* (eschewing discussion of applicants' potential bad-faith definition of business purpose).

70. *See id.* at 655 (holding that EPA need not consider fuel sources in step one of BACT analysis).

71. *See id.* at 656 (acknowledging court was faced with "borderline case" such that tribunals encountering similar questions in future should proceed with caution).

72. 14 E.A.D. 484, 1 (EAB 2009).

73. *See id.* at 36 (considering whether regional EPA properly granted permit for construction of coal-fired power plant). Petitioners sought to prevent EPA's Region Nine office from issuing a PSD permit to Desert Rock for construction of a coal-fired electric generating plant. *Id.* at 1 (summarizing third parties' attempts to challenge applicant's planned local activities).

Board articulated a two-step process by which it purported to hold applicants accountable and avoid the concerns briefly raised in *Sierra Club*.⁷⁴ First, “the permit applicant initially ‘defines the proposed facility’s end, object, aim, or purpose—that is the facility’s basic design.’”⁷⁵ Second, the EPA takes a “hard look” to determine when an aspect of a facility’s design is inherent to its purpose such that change would redefine the source.⁷⁶ Remanding the entire petition to the regional permit issuer, the EAB determined that the EPA abused its discretion by failing to take a hard look at whether use of a particular control technology would require modification of an inherent aspect of the facility’s design.⁷⁷ While the regional permit issuer thoroughly explained why the control technology was not technically or economically viable within the project, the EAB determined that questions of feasibility must be addressed at step four of the BACT process rather than step one.⁷⁸ The EAB held that the BACT analysis was a crucial aspect of the PSD permitting process and thus should be afforded complete attention.⁷⁹

C. Special Rules for Biogenic Carbon Dioxide

In November 2010, the EPA released additional documentation to guide source operators and officials through the review of PSD applications where greenhouse gasses are expected to be released.⁸⁰ While noting that “[t]he fundamental aspects of the PSD and title V permitting programs are generally not affected by the integration of [greenhouse gases] into these programs,” the EPA declared that certain types of biomass-burning operations should

74. *See id.* at 36 (adopting EAB’s test as set forth in *Prairie State*).

75. *See id.* (describing applicant’s responsibilities to define scope of project).

76. *See id.* (defining permit issuer’s duty to stringently view applicant’s good faith definition of project).

77. *See Desert Rock Energy Co.*, 14 E.A.D. at 38 (holding that BACT analysis was not properly conducted). The proposed alternative control technology, an Integrated Gasification Combined Cycle (IGCC), would convert coal into a cleanable synthetic gas before being burned—allowing the source operator to remove various “particulate matter, mercury, sulfur compounds, ammonia, and other acid gases” that would otherwise be released when burning unconverted coal. *Id.* at 32 (describing advantages of burning coal through IGCC).

78. *See id.* at 31 (holding that step four merits consideration of “issues surrounding the relative cost effectiveness of the alternative technologies”).

79. *See id.* at 28, 30 (restating importance of BACT process for proper enforcement of CAA provisions).

80. Office of Air Quality Planning and Standards, *PSD and Title V Permitting Guidance for Greenhouse Gases* 1, 4 (Nov. 2010), U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/sites/production/files/2015-12/documents/ghgpermittingguidance.pdf> [hereinafter *Greenhouse Gas Guidance*] (explaining differences between 1990 Draft Guidance and guidance for greenhouse gases).

be given special consideration under the traditional BACT framework.⁸¹ Although it had not yet made the requisite scientific determinations that would enable permanent rulemaking, the EPA indicated it would allow permitting authorities to conclude, in some instances, that “certain types of biomass [fuels] by themselves are BACT for GHGs.”⁸²

In March 2011, the EPA released interim guidance supplementing both the 1990 BACT framework and November 2010 documentation to the extent they address carbon dioxide emissions from biomass-burning.⁸³ Recommending that “permitting authorities apply the analytical framework recently articulated by the Environmental Appeals Board[,]” the EPA expounded upon its position that “in most cases . . . utilization of biomass fuel alone is BACT for a bioenergy facility.”⁸⁴ Further, the documentation provides that “where . . . biogenic fuel is fundamental to the primary purpose of the project . . . permitting authorities can rely on that to determine that use of another fuel would redefine the proposed source.”⁸⁵ The guidance directs permit issuers to apply the traditional top-down BACT analysis articulated in its November 2010 guidance, with several modifications.⁸⁶

First, the EPA called explicit attention to the source redefinition exception upheld in several Environmental Appeals Board decisions.⁸⁷ Presumably recognizing that facilities most often burn biomass as a primary fuel source rather than a secondary source, the EPA explained that making use of the source redefinition exception would reduce the number of alternative control technolo-

81. *See id.* at 4, 9 (announcing that EPA intended to release future BACT guidance in light of biomass stocks’ potential to act as greenhouse gas “sinks”).

82. *See id.* at 9 (acknowledging departure from general conception of control technology).

83. Office of Air and Radiation, *Guidance for Determining Best Available Control Technology for Reducing Carbon Dioxide Emissions from Bioenergy Production* 1, 3-4 (Mar. 2011), U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/sites/production/files/2015-12/documents/bioenergyguidance.pdf> [hereinafter *Bioenergy Guidance*] (providing permitting authorities and applicants with guidance in lieu of pending rules favoring implementation of biogenic fuel generation).

84. *See id.* at 5, 12 (declining to extend special BACT consideration for biogenic fuels as far as Greenhouse Gas Guidance).

85. *Id.* at 15 (applying source redefinition exemption).

86. *See id.* at 15-16, 20-30 (noting special considerations within traditional BACT analysis for biogenic sources). For an overview of the EPA’s top-down BACT analysis, see *supra* notes 57-79 and accompanying text.

87. *See id.* at 15-16 (encouraging usage of exception by regional permitting authorities).

gies available for consideration at step one.⁸⁸ Second, the EPA noted modifications to traditional circumstances under step four that would be afforded special consideration for bioenergy sources.⁸⁹ For instance, issuers are now encouraged to consider beneficial carbon sequestration properties of biomass stocks when determining environmental effects of the source.⁹⁰ Under this latest guidance, the EPA recognized that add-on controls for carbon dioxide can often be eliminated from consideration by both the applicant and the permit issuer due to extortionate annual costs.⁹¹ The agency also cited economic benefits to local communities that weigh in favor of selecting biomass burning as BACT.⁹² Finally, the EPA noted that, because its tentative findings and evidence offered at public comment suggested that certain biomass stocks had a negative net contribution to atmospheric carbon dioxide levels, its conclusions were limited solely to those fuels until further research could be conducted.⁹³ Qualifying its findings, however, the EPA determined that formal adoption of the rule required “further discussion with partners and scientists both inside and outside the federal government, as well as engagement with an independent scientific panel, before it [could] make more qualitative characterizations beyond [those pertaining to mill residues].”⁹⁴

Later in 2011, the EPA announced a new rule titled Deferral for CO₂ Emissions from Bioenergy and Other Biogenic Sources Under the Prevention of Significant Deterioration (PSD) and Title V Programs,⁹⁵ which delayed the effective date of regulations per-

88. See *Bioenergy Guidance*, *supra* note 83, at 1-15 (explaining advantages of source redefinition exception in context of biomass-burning).

89. See *id.* at 20-30 (detailing differences at step four between original *Greenhouse Gas Guidance* and *Bioenergy Guidance*). The prospective sequestration of carbon dioxide over the lifespan of the biomass stocks is given special consideration at this step because other fuel sources lack similar beneficial collateral effects. *Id.* at 20-21.

90. See *id.* at 20-24 (summarizing EPA’s factual determinations to date regarding carbon neutrality of biomass stocks).

91. See *id.* at 24-25 (raising presumption that add-on controls for bioenergy facilities are often too costly for operators to implement).

92. See *id.* at 25-27 (noting potential job creation and stimulation of regional economies).

93. See *Bioenergy Guidance*, *supra* note 83, at 29 (limiting effect of EPA’s conclusions). The EPA’s conclusion that mill residue materials such as wood shavings, scraps, and chips have a negligible impact on the net carbon cycle and thus should not require emissions reduction strategies hinges upon the fact that such materials “would otherwise decompose in a [ten to fifteen] year time frame.” See *id.*

94. *Id.* at 24 (restraining scientific conclusions regarding beneficial effects of burning other biomass fuels).

95. 76 Fed. Reg. 43,490 (July 20, 2011) (codified at 40 C.F.R. pts 51, 52, 70, 71).

taining to biogenic carbon dioxide sources that have a de minimis effect on atmospheric carbon content.⁹⁶ While the EPA originally declined to allow any permitting exemptions for operators of biogenic carbon dioxide sources when drafting its Tailoring Rule a year earlier, it later reconsidered after inviting public comment on the topic.⁹⁷ Developing its directive based upon information submitted by interested groups, the EPA issued its final rule deferring regulation of biogenic carbon dioxide emissions for three years:⁹⁸

The information . . . indicates that at present attempting to determine the net carbon cycle impact of [biomass combustion] would require extensive analysis and would therefore entail extensive workload requirements by many of the permitting authorities [T]hese uncertainties and complexities [in contrast to other sources] are exacerbated because of the unique role and impact biogenic sources of CO₂ have in the carbon cycle. Further, methodologies are not sufficiently developed to assure that various permitting authorities would be able to perform the necessary calculations reasonably and consistently to determine the net atmospheric impact in many, if not all, instances.⁹⁹

The EPA noted that it would engage in its own, independent research while the deferral period was active.¹⁰⁰

In *Center for Biological Diversity v. U.S. Environmental Protection Agency*,¹⁰¹ however, several environmental groups challenged the “Deferral Rule” on grounds that the EPA’s rationale was arbitrary and capricious.¹⁰² Specifically, petitioners argued the rule contravened the plain language of the CAA, and that, by refusing to regulate greenhouse gasses emitted by biomass-burning sources, the EPA shirked its duties as defined by Congress.¹⁰³ While declining

96. *See id.* at 43,492 (establishing that, for duration of temporary deferral, biogenic fuel sources are to be treated as if carbon neutral).

97. *See id.* (detailing outcry at Call for Information that motivated EPA’s initial proposal of regulation).

98. *See id.* (detailing timeline of passage of regulation).

99. *Id.* at 43,422 (quoting EPA’s stated purpose of regulation).

100. *See id.* (justifying exemption of bioenergy sources from Tailoring Rule as providing time necessary to carry out research into carbon cycle impacts).

101. 722 F.3d 401 (D.C. Cir. 2013).

102. *See id.* at 404 (reviewing Deferral Rule in light of Supreme Court’s interpretation of “air pollutant” in *Massachusetts*).

103. *See id.* at 408-09 (stating petitioners’ claim that EPA failed to adequately justify conclusions leading to proposal of rule).

to answer the question of whether “the Clean Air Act unambiguously requires the regulation of all carbon dioxide from whatever source,” the court held in favor of petitioners, vacating the Deferral Rule.¹⁰⁴ Because the EPA did not satisfy the requirements of the administrative doctrines governing its delay of mandated regulation, the majority held that the EPA’s basis for creating the rule was both arbitrary and capricious without considering the EPA’s justification for singling out GHGs that originate from bioenergy facilities.¹⁰⁵

D. Deference Due to Administrative Guidance

As applied in the cases discussed above, agency action is reviewed under the “arbitrary and capricious” standard established by the Administrative Procedure Act.¹⁰⁶ Such an assessment necessitates not only a look into the outcome of the case at bar, but also an examination of the agency’s supporting facts and conclusions of law.¹⁰⁷ The level of deference due to agency findings thus merits additional questions: the Supreme Court’s decision in *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*¹⁰⁸ governs various courts’ determinations as to whether to leave executive findings or conclusions undisturbed.¹⁰⁹ The Court articulated two steps:

104. *See id.* at 409, 412 (reciting EPA’s statement of purpose as written in text of regulation in articulating disposition).

105. *See id.* at 411-12 (declining to accept claims while holding in favor of petitioners). In the concurring opinion, however, Judge Kavanaugh did discuss the issue avoided by the majority, reasoning that the text of the CAA contains no basis for “distinguish[ing] biogenic carbon dioxide from other sources of carbon dioxide that EPA is required . . . to regulate.” *Id.* at 412 (Kavanaugh, J., concurring) (relying on textualists’ position). On the issue of whether the CAA required equal regulation of all pollutants, the concurrence answered in the affirmative. *See id.* at 413 (holding statute was unambiguous).

106. 5 U.S.C. § 706(2)(A). For examples of the courts’ review of decisions made by regional offices of the EPA, see *supra* notes 65-79 and accompanying text.

107. *See Helping Hand Tools v. U.S. Env’tl. Prot. Agency*, 848 F.3d 1185, 1194 (9th Cir. 2016) (conducting stringent inquiry into rationale behind agency decision). “We do not simply review whether it was arbitrary or capricious’ for the Board to reject a petitioner’s claims that EPA clearly erred. ‘Rather, we conduct a deferential review of the entire agency action,’ including whether approval of the PSD permit is based on a clearly erroneous finding of fact or conclusion of law.” *Id.* (quoting *Citizens for Clean Air v. U.S. Env’tl. Prot. Agency*, 959 F.2d 839, 845-46 (9th Cir. 1992)) (citation omitted) (reciting deferential standard applicable to agency actions).

108. 467 U.S. 837 (1984).

109. *See id.* at 842-44 (setting forth framework for review of agency construction of ambiguous statutory terms). The Court reviewed the petitioners’ claim that the EPA impermissibly construed the term “stationary source” as recorded in the Clean Air Act Amendments of 1977. *See id.* at 838. While Congress left the term undefined, the Court of Appeals concluded that the EPA’s subsequent establish-

“First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear . . . the court, as well as the agency must give effect to [the statute].”¹¹⁰ Otherwise, “if the statute is silent or ambiguous . . . the question for the court is whether the agency’s answer is based on a permissible construction of the statute.”¹¹¹ In such cases, deference is afforded to agency constructions that are neither “arbitrary, capricious, [n]or manifestly contrary to the statute.”¹¹²

On the question of whether certain types of agency findings merit departure from the *Chevron* framework, *Christensen v. Harris County*¹¹³ and *United States v. Mead Corp.*¹¹⁴ provide insight.¹¹⁵ *Christensen* stands for the notion that agency interpretations of statutory provisions are not entitled to deference when adopted through informal procedures.¹¹⁶ In *Mead*, the Court further carved back the immutability of agency interpretations, explaining that where Congress “[does not] delegate[] authority to the agency generally to

ment of a more lenient permitting scheme and accompanying air pollutant emissions standard based on its own construction of the term was “inappropriate.” *See id.* at 841-42 (describing appellate court’s findings).

110. *Id.* at 842-43 (stating first inquiry of *Chevron* analysis).

111. *Id.* at 843 (reciting second inquiry of Court’s framework).

112. *See id.* at 843-44 (specifying underlying Agency determinations that Court must examine). In *Chevron*, the meaning of the term adopted by the EPA had neither been approved nor discouraged by specific language in the CAA Amendments. *See id.* at 851 (analyzing 1977 Amendments). The legislative history, however, indicated that Congress was *sensitive* to the tension between the economic interests of source operators in less stringent emissions standards and the public interests in reducing air pollution such that it sought to further both pursuits. *Id.* Further militating in favor of the EPA’s interpretation was the argument that judges should generally maintain respect for agency determinations as members of the executive branch are accountable “to the people.” *See id.* at 865-66.

113. 529 U.S. 576 (2000).

114. 533 U.S. 218 (2001).

115. *See Christensen v. Harris County*, 529 U.S. at 585 (effectuating escape from primacy of *Chevron* standard); *see United States v. Mead Corp.* 533 U.S. 218 at 219-20 (revisiting *Chevron* paradigm); *see also* Eric R. Womack, *Into the Third Era of Administrative Law: An Empirical Study of the Supreme Court’s Retreat from Chevron Principles in United States v. Mead*, 107 DICK. L. REV. 289, 304-16 (2002) (describing evolution of deference principles); *see also* Note, *The Two Faces of Chevron*, 120 HARV. L. REV. 1562, 1571-72 (2007) (pronouncing return of deference doctrine to original expertise factors).

116. *See Christensen*, 529 U.S. at 586-87 (bifurcating administrative determinations on basis of agencies’ adherence to rulemaking procedures).

[I]nterpretation[s] contained in an opinion letter, not one arrived at after, for example, a formal adjudication or notice-and-comment rulemaking. Interpretations such as those in opinion letters-like interpretations contained in policy statements, agency manuals, and enforcement guidelines, all of which lack the force of law-do not warrant *Chevron*-style deference.

Id. at 587.

make rules carrying the force of law, [or] that the agency interpretation claiming deference was [not] promulgated in the exercise of [that] authority,” then no *Chevron* deference need be given to the agency’s interpretation.¹¹⁷

Collectively, therefore, precedent supports that *unofficial* or *informal* agency findings such as those found in letters, office manuals, or guidance documents are not granted *Chevron* deference if not intended by Congress to carry the “force of law.”¹¹⁸ Rather, under the Court’s earlier decision in *Skidmore v. Swift & Co.*,¹¹⁹ such agency policy statements are not controlling upon courts, but may be given weight dependent on the “thoroughness evident in [their] consideration, the validity of [their] reasoning, [their] consistency with earlier and later pronouncements, and all those factors which give [them] power to persuade”¹²⁰

Even where courts decline to engage in discourse over the application of *Skidmore* and its progeny to a particular set of facts, the scientific nature of an agency’s determination has led courts to grant administrators wide latitude when interpreting statutes.¹²¹ In *Baltimore Gas & Electric Company v. Natural Resources Defense Council, Inc.*,¹²² the Supreme Court heard challenges to a regulation published by the Nuclear Regulatory Commission (NRC) pursuant to the National Environmental Policy Act (NEPA).¹²³ For purposes of the statute, the NRC formally adopted the view that “permanent

117. See *Mead*, 533 U.S. at 226-27 (defining additional criteria meriting consideration in light of *Christensen*).

118. See *The Two Faces of Chevron*, *supra* note 115, at 1579 (describing courts’ avoidance of *Chevron* standard).

119. 323 U.S. 134 (1944).

120. *Id.* at 140 (defining factors relevant to courts’ determination of persuasive value of agency policy statements); see also *Wilderness Soc’y v. U.S. Fish & Wildlife Serv.*, 353 F.3d 1051, 1068 (9th Cir. 2003) (applying *Skidmore*’s standard where administrative interpretation of statute did not carry force of law). While still valid law post-*Chevron*, *Christensen*, and *Mead*, *Skidmore* faces criticisms that its test is “vague and indeterminate,” and leaves “so much discretion in the hands of trial (or appellate) judges . . . that the test . . . seem[s] to sanction granting no deference at all.” See *Womack*, *supra* note 115, at 294.

Skidmore review looks to the context of the agency’s interpretation, including especially its expertise in the subject area, whereas *Chevron* focuses on the correspondence between the agency’s interpretation and Congress’s intent. Accordingly, a court might find an agency’s expert interpretation persuasive, but had it gone through the *Chevron* inquiry it might have found that Congress had clearly indicated a different interpretation, which would have ended the analysis.

See *The Two Faces of Chevron*, *supra* note 115, at 1579.

121. See generally *Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983) (discussing standard of review affording highest deference to agency action).

122. 462 U.S. 87 (1983).

123. See *id.* (describing events leading to litigation at hand).

storage of certain nuclear wastes would have no significant environmental impact” because methods of storage, which would greatly reduce the risk of leakage, would likely be developed in the future.¹²⁴ Dismissing petitioner’s claims that the regulation was arbitrary and capricious, the Court closely contemplated the record, which consisted of thousands of pages of testimony, oral hearings, a 137-page report, and multiple studies conducted by the Commission itself.¹²⁵ Because the Commissioner’s predictions were “within its area of special expertise, at the frontiers of science” and substantial support was contained within the record, the administrative determination was “within the bounds of reasoned decisionmaking.”¹²⁶ While the Court made no mention of the *Skidmore* line of cases nor drew attention to any binding effect of the assumption outside of the NRC’s licensing decisions, the Court nevertheless afforded the Commission the utmost level of deference: “[w]hen examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.”¹²⁷

IV. NARRATIVE ANALYSIS

Denying petitioners’ calls for review on the grounds that the EAB’s decision was neither arbitrary nor capricious, the Court of Appeals for the Ninth Circuit in *Helping Hand Tools* first relied upon

124. *Id.* at 98 (explaining rationale behind NRC’s zero-release assumption).

125. *See id.* at 98 n.11 (pointing out substantial evidence used by Commission to arrive at zero-release assumption).

126. *See id.* at 103-04 (articulating Court’s core holding). Scholars point out that the Court’s deference in *Baltimore Gas & Electric* was afforded not simply on the complexity of the subject matter and the degree of expertise required to reach the Commission’s conclusion, but was also offered under the view that such conclusions constitute an adoption of policy reserved only for branches bound directly by the electorate—a privilege that should remain undisturbed by the judiciary. *See* Emily Hammond Meazell, *Super Deference: The Science Obsession, and Judicial Review as Translation of Agency Science*, 109 MICH. L. REV. 733, 761 (2011) (quoting *Baltimore Gas & Elec.*, 462 U.S. 87, 105) (drawing attention to Court’s secondary avenue of justification for deferential review).

127. *Baltimore Gas & Elec.*, 462 U.S. at 103 (setting forth level of deference due to agency findings involving scientific expertise). *Baltimore Gas & Electric* is one of only a handful of cases in which the Supreme Court afforded its “most deferential” standard to agency action. *See, e.g.*, *Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 519-20 (1978) (deferring to Atomic Energy Commission’s adoption of rulemaking procedures as fulfilling Congressional requirements for federal agencies); *see also* *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 360 (1989) (upholding agency decision to decline to prepare supplemental environmental impact statement to address alleged adverse effects of dam construction on water turbidity).

the foregoing analysis of the Seventh Circuit in *Sierra Club*.¹²⁸ First, the Ninth Circuit determined the EPA reasonably concluded that considering fuel sources other than biomass would impermissibly redefine the source.¹²⁹ Second, addressing petitioners' novel claim that the EPA should not have considered biomass alone in step one of its BACT analysis in accordance with its Bioenergy Guidance, the court found that the EPA's reliance on special expertise placed it at the "frontiers of science" and justified departure from the traditional BACT analysis.¹³⁰ The Ninth Circuit expressed uncertainty as to the level of deference that should be given to the EPA's BACT guidance and therefore avoided discussion as to its legal effect.¹³¹

A. Adoption of the Seventh Circuit's Framework in *Sierra Club*

Sustaining the Ninth Circuit's long-applied principle that permitting authorities need not consider implementation of control technologies that would disrupt the project's basic business purpose, the court mirrored the Seventh Circuit's analysis in *Sierra Club*.¹³² The court grounded its reasoning in the project descriptions accompanying both Sierra Pacific's application and the EPA's issued permit, which designated the use of co-located biomass fuels as part of the facility's inherent design.¹³³ Similar to Judge Posner's review of the EAB's decision in *Prairie State*, the Ninth Circuit narrowly construed the applicant's basic business purpose—in the noted case, the use of on-site wood waste—to the greatest extent possible.¹³⁴ Acknowledging that Sierra Pacific's self-defined business purpose would govern application of the source redefinition

128. *Helping Hand Tools v. U.S. Evtl. Prot. Agency*, 848 F.3d 1185, 1194 (9th Cir. 2016) (explaining justification was "guided by well-reasoned decisions of Board and the Seventh Circuit").

129. *See id.* at 1198 (setting forth Ninth Circuit's holding on petitioners' first claim).

130. *See id.* at 1198-99 (discussing petitioners' alternative claim and analyzing under *Baltimore Gas & Electric* rather than *Chevron* and *Skidmore*).

131. *See id.* at 1199 (noting aspects of guidance which evidenced non-binding treatment by EPA). The court avoided addressing the extent of legal effect of the guidance by noting that the court need not consider it since the EPA's actions were "neither arbitrary or capricious," as discussed later in the opinion. *See id.*

132. *Compare id.* at 1197 (reiterating Seventh Circuit's credence to EPA's long-held and widely accepted exception) *with* *Sierra Club v. U.S. Evtl. Prot. Agency*, 499 F.3d 653, 656-67 (7th Cir. 2007) (distinguishing between decisions to adopt control technologies and decisions to redesign proposed project).

133. *Helping Hand Tools*, 848 F.3d at 1197 (granting leeway to Sierra Pacific's application's design aspects of biomass burning facility).

134. *Id.* (recognizing rejection of petitioners' broad view of facility's basic business purpose as "generat[ing] steam for lumber drying kilns and [making] electricity").

exception, the court took a “hard look” at the appropriateness of Sierra Pacific’s project definition and was satisfied that the applicant had not unreasonably limited its goals for constructing the bioenergy facility.¹³⁵

While noting that, traditionally, the BACT analysis would compel consideration of a higher natural-gas-to-biomass ratio, the Ninth Circuit swiftly resolved the “borderline” case at hand as the Seventh Circuit did in *Sierra Club*.¹³⁶ Again, the court’s narrow determination of Sierra Pacific’s basic business purpose led it to agree that greater usage of natural gas would run afoul of the facility’s inherent design.¹³⁷ To solidify its justification, the Ninth Circuit declined to involve itself further in the technical aspects of the doctrine, holding that “[d]rawing the line between control technology and redefining the source is a technical determination to which a court should defer to [the] EPA.”¹³⁸ The court reaffirmed Judge Posner’s pronouncement that it “makes sense” to let the EPA, as author, draw the line “where control technology ends and a redesign of the ‘proposed facility’ begins.”¹³⁹

B. A “Hands-off” Approach to the Agency’s Modified BACT Analysis for Biogenic Fuel

The Ninth Circuit’s dismissal of petitioners’ alternative challenges likewise relied upon deferential views of agency action.¹⁴⁰ Observing that agency construction of statutory ambiguity is permissible unless “arbitrary, capricious, or manifestly contrary to the statute,” the court addressed the EPA’s implementation of gui-

135. *See id.* (analogizing location of bioenergy unit adjacent to biomass fuel stocks to coal-fired plant adjacent to mine in *Prairie State*).

136. *See id.* at 1197-98 (distinguishing local access to both dirty biomass and clean natural gas from off-site access to low-sulfur fuel in *Sierra Club*).

137. *Id.* at 1198 (reasoning that usage of natural gas was incidental to usage of biomass). “Greater utilization of a fuel that the applicant is already proposing to use in some aspect of the project design should be listed as an option in Step 1 unless it can be demonstrated that such an option would disrupt the applicant’s basic business purpose for the proposed facility.” *Id.* (quoting *Greenhouse Gas Guidance*, *supra* note 80).

138. *See Helping Hand Tools*, 848 F.3d at 1198 (citing *Sierra Club v. U.S. Envtl. Prot. Agency*, 499 F.3d 653, 655 (7th Cir. 2007)) (applying heightened deference when faced with technical determinations as to projects’ business purposes).

139. *See id.* (citing *Sierra Club*, 499 F.3d at 655) (deferring to EPA determinations in borderline cases where changes to design are proposed).

140. *See id.* at 1198-1201 (summarizing holding on petitioners’ challenge regarding EPA’s findings and suggested procedures contained in Bioenergy BACT Guidance).

dance materials for biogenic fuel sources.¹⁴¹ The court acknowledged *Chevron* and *Skidmore*, admitting that the weight afforded to informal agency determinations depends upon its “thoroughness, rational validity, and consistency with prior and subsequent pronouncements.”¹⁴² Namely, the court pointed to the case-by-case application of the guidance documents to permit requests and the fact that the EPA drafted the guidance so as not to carry the force of law.¹⁴³ Finding, however, that the agency’s action occurred against the backdrop of its special expertise or at the “frontiers of science,” the Ninth Circuit ruled that a court should “be at its most deferential” under *Baltimore Gas & Electric*.¹⁴⁴ The court declined to reach any determination on the level of deference to be given to the guidance itself.¹⁴⁵ Even if the March 2011 guidance was afforded minimal significance, the agency’s action under review was neither arbitrary nor capricious.¹⁴⁶

In support of its assertion, the court drew attention to the EPA’s authority to modify and rely on its top-down BACT approach.¹⁴⁷ Although petitioners questioned the EPA’s inclusion of biomass-burning as the sole, stand-alone control technology in step one, the Ninth Circuit determined that the EPA’s limiting of available options at the outset of the analysis was reasonable.¹⁴⁸ The court found persuasive the EPA’s argument that even though utilization of biogenic fuel does not itself curtail emissions of greenhouse gasses, biomass-burning at the EPA’s prescribed limits could qualify as a “baseline” by which to compare the effects of add-on control technology.¹⁴⁹

141. *Id.* at 1199 (quoting *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 844 (1984)) (describing standard of review of agency action).

142. *Id.* (quoting *Wilderness Soc’y v. U.S. Fish & Wildlife Serv.*, 353 F.3d 1051, 1068 (9th Cir. 2003)) (discussing factors relevant to determine whether courts should respect administrative guidance).

143. *See Helping Hand Tools*, 848 F.3d at 1199 (citing reasons why court found legal effect of guidance documents unclear).

144. *See id.* (quoting *Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983)) (eschewing analysis under *Mead* and *Skidmore*, and instead subjecting agency findings to far less stringent standard).

145. *Id.* (refusing, on appeal, to consider EPA’s conclusion that biomass-burning generally constitutes BACT).

146. *Id.* (avoiding discussion of *Chevron* and *Skidmore* through application of *Baltimore Gas & Elec.*).

147. *Id.* (upholding argued departure from traditional BACT analysis).

148. *See Helping Hand Tools*, 848 F.3d at 1199-1200 (adopting EPA’s definition of “control” over petitioners’ argument that burning biomass itself does nothing to reduce GHG emissions).

149. *See id.* (rationalizing EPA’s avoidance of analyzing alternative control technologies). The court acknowledged that the EPA summarily discussed and

In addition, the Ninth Circuit reasoned that the EPA was justified in refusing to assess different fuel stocks at step one.¹⁵⁰ Because the agency had yet to make scientific findings distinguishing between environmental impacts of burning different types of wood-waste, it could not be compelled to provide a “qualitative determination” in the instant scenario.¹⁵¹ The court, therefore, deemed any negative effect of burning certain types of biomass an “indirect” consequence that should be addressed in step four.¹⁵²

Finally, because an independent environmental impact assessment was carried out under the assumption that thirty-five percent of the fuel would be sourced from outside the facility, the Ninth Circuit was satisfied that the EPA had addressed the effects of transporting fuel stocks to the plant.¹⁵³ The Ninth Circuit further looked favorably upon Sierra Pacific in light of its requests for restrictions on the biomass fuel stocks it was allowed to burn.¹⁵⁴ The EPA and Sierra Pacific’s agreed-upon restrictions were sufficient, in the opinion of the Ninth Circuit, to assuage concerns that Sierra Pacific would not abuse its permit by clear-cutting forests to feed its power plant.¹⁵⁵ Paying homage to the “evolving analysis of the environmental effect of different biomass fuels in the ever-developing field of climate change science,” the court held that the EPA’s guidance and grant of the PSD permit was rational and consistent with prior practice.¹⁵⁶

V. CRITICAL ANALYSIS

In *Helping Hand Tools*, the Ninth Circuit correctly adopted and applied the source redefinition analysis articulated by its sister cir-

rejected the possibility of imposing alternative requirements on Sierra Pacific to reduce GHG emissions, such as efficient operation and maintenance routines and good combustion practices. *Id.* at 1200.

150. *Id.* at 1200 (reiterating that EPA had yet to conduct independent research pertaining to GHG emissions from various types of biomass fuel).

151. *See id.* (calling for determination grounded in primary research).

152. *See id.* (citing EPA’s language in bioenergy guidance diminishing environmental impact of carbon dioxide released from certain biomass stocks).

153. *See Helping Hand Tools*, 848 F.3d at 1200 (rewarding applicant’s self-imposed restrictions, which allowed Sierra Pacific to burn only readily available wood wastes).

154. *See id.* (granting Sierra Pacific leeway in negotiating permitting restrictions).

155. *See id.* at 1200-01 (detailing reasoning why concerns that Sierra Pacific would engage in environmentally harmful logging operations were insignificant).

156. *Id.* at 1200 (articulating outcome upholding Sierra Pacific’s PSD permit and validity of *Bioenergy Guidance*).

cuit in *Sierra Club*.¹⁵⁷ The Ninth Circuit keenly navigated the “borderline case” analysis spelled out by Judge Posner, setting aside collocation of the facility and fuel source to determine the basic business purpose of the applicant.¹⁵⁸ In doing so, the court provided adequate justification for why Sierra Pacific’s self-imposed cap on natural gas usage is permissible—that doing so would defeat Sierra Pacific’s use of wood waste as fuel.¹⁵⁹ For these reasons, the Ninth Circuit’s analysis justifies its ruling on petitioners’ primary argument.¹⁶⁰ The court’s treatment, however, of the novel issue whether deference should be afforded to the EPA’s biogenic emissions rules sets concerning precedent in light of the EPA’s lack of supporting evidence concerning the realistic benefits of biomass-burning.¹⁶¹ Ultimately, the court’s faulty application of Supreme Court precedent on the standard of review yields to agency action at every turn, leading to the hasty conclusion that the EPA’s granting of the PSD permit was neither arbitrary nor capricious.¹⁶²

A. The Court’s Misapplication of *Baltimore Gas & Electric*

The Ninth Circuit’s shortcomings in *Helping Hand Tools* can be traced to its application of the “most deferential” standard of review articulated in *Baltimore Gas & Electric*, and the court’s conclusions regarding the sufficiency of the scientific record.¹⁶³ Most importantly, the court failed to distinguish *Baltimore Gas & Electric* and the case at hand: whereas the Supreme Court justified its deference to the administrator in *Baltimore Gas & Electric* by noting the volumi-

157. For a detailed discussion regarding the court’s treatment of other circuits’ analyses, see *supra* notes 128-156 and accompanying text.

158. For an explanation of the Seventh Circuit’s holding in *Sierra Club*, see *supra* notes 65-71 and accompanying text.

159. For a narrative overview of the Ninth Circuit’s analysis on the petitioners’ first contention arguing that the source-redefinition exception should not apply, see *supra* notes 132-139 and accompanying text.

160. See *id.* (explaining rationale underlying holding in Part III of opinion).

161. For an explanation of the potential impact of the Ninth Circuit’s decision, see *infra* notes 185-198 and accompanying text.

162. For a discussion of the court’s misapplication of decisions regarding the standards of review, see *infra* notes 163-175 and accompanying text; see generally *Helping Hand Tools*, 848 F.3d at 1198 (alluding to turbulent status of current climate change research). The court noted “EPA currently lacks the scientific data at this time to make such a quantitative determination and is actively collecting the data to do in the future the type of analysis desired by the Center.” *Id.* For background information on scientific studies shaping the debate on greenhouse gas regulations, see *supra* notes 1-8 and accompanying text.

163. For a more detailed description of the Ninth Circuit’s analysis of the agency’s BACT analysis in *Helping Hand Tools*, see *supra* notes 140-156. For a discussion regarding the sufficiency of scientific support for agency policy statements, see *supra* notes 106-127 and accompanying text.

nous scientific evidence contained in the record, the Ninth Circuit deferred to EPA's unsupported predictions that biomass-burning would, in most cases, constitute best available control technology.¹⁶⁴ Here, the EPA's scant evidence underlying its prediction, and accordingly the Guidance as a whole, was a "consensus from commenters on the [Call for Information]."¹⁶⁵ As noted in the Center for Biological Diversity's Petition for Rehearing, the court failed to recognize that the purported benefits of biomass combustion were buoyed by commenters' suggestions that burning mill residues would have a negligible atmospheric impact.¹⁶⁶ This blanket assertion merely "appear[ed] credible" to the EPA.¹⁶⁷ In support of its conclusion, the EPA neglected to provide any external sources within the most important section of its Bioenergy BACT Guidance.¹⁶⁸ Accordingly, the court should not have reached the conclusion that the EPA's actions "at the frontiers of science" necessitated a deferential review, as the record supports only that the EPA's assertions lacked any basis in hard, scientific evidence and were therefore arbitrary.¹⁶⁹

164. *Compare* Baltimore Gas and Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 98-100 (1983) (discussing scientific support behind Commission's NEPA analysis) *with* *Helping Hand Tools*, 848 F.3d at 1200 and *Bioenergy Guidance*, *supra* note 83, at 20-24, 28-29 (failing to cite substantial scientific findings in support of general assertion that biomass burning is carbon neutral).

165. *Bioenergy Guidance*, *supra* note 83, at 21-23 (pointing to conclusions made at public comment).

166. *Id.* at 23 (deferring to assertions made by interested parties).

For at least one category of biomass feedstocks that may be used in energy production, it does appear possible at this time to conclude that the atmospheric impact is negligible. Some commenters on the CFI suggested that utilizing mill residue (e.g. sawdust, planar shavings, panel trim) to generate energy, rather than leaving the residue to decompose, likely would not cause emissions over and above that which would have taken place if the energy use did not occur.

Id.; *see also* Petition for Rehearing and/or Modification of Opinion by Petitioner Center for Biological Diversity at 2-6, *Helping Hand Tools v. U.S. Env'tl. Prot. Agency*, 848 F.3d 1185 (2016) (No. 14-72602) (arguing EPA's predictions were supported by arbitrary conclusions).

167. *See Bioenergy Guidance*, *supra* note 83, at 20-24 (discussing emissions released when using mill residue to generate energy). The guidance states, "Given that this [residue] would have decomposed under natural circumstances in a short period of time (e.g., [ten to fifteen] years) in the absence of utilization as bioenergy, this conclusion appears credible." *Id.* at 23.

168. *See id.* at 20-24 (explaining environmental impact of biomass burning without citations to credible sources).

169. *Compare* *Helping Hand Tools v. U.S. Env'tl. Prot. Agency*, 848 F.3d 1185, 1198 (9th Cir. 2016) (justifying deference given to EPA through agency's elevated level of expertise) *with* *Nat. Res. Def. Council v. U.S. Env'tl. Prot. Agency*, 735 F.3d 873, 881-84 (9th Cir. 2013) (holding scientific record was insufficient under agency's own standards to support grant of highest deference); *see also* Harnett,

Were *Baltimore Gas & Electric* correctly distinguished, the Ninth Circuit would have reached the question of whether *Chevron* or *Skidmore* deference applied.¹⁷⁰ Unlike the agency determinations challenged in *Baltimore Gas & Electric*, which were contained within final regulations and promulgated according to formal procedures, the EPA's predictions were located within informal guidance documentation created outside of the administrative procedural framework.¹⁷¹ While the EPA published its guidance pursuant to authority granted under the CAA's PSD provisions, the disclaimer contained within the introduction as well as the pervasive references to the document's tentative legal nature all support that the Bioenergy BACT Guidance did not carry the force of law and thus should not be afforded *Chevron* deference under *Mead*.¹⁷² If such a finding were made, the EPA's actions would be subject to the alternate standard of thoroughness, rational validity, and consistency with prior and subsequent announcements under *Skidmore*.¹⁷³ In turn, the standard would be less likely to justify granting deference to the agency, as *Skidmore* involves a weighing of "all those factors which give [the agency determination] power to persuade."¹⁷⁴ The EPA's Bioenergy Guidance lacks a thoroughly developed body of support such that the application of *Skidmore* would place it on the

supra note 11, at 596 (describing court's ruling that agency's opinion was insufficient to grant deference, even if scientific record was sufficient).

170. See *Helping Hand Tools*, 848 F.3d at 1199 (declining to consider question whether *Chevron* or *Skidmore* applies in light of deference due to scientific and technical expertise).

171. Compare *Baltimore Gas & Elec.*, 462 U.S. at 89-90 (discussing commission's new regulations governing determinations of environmental impact of nuclear power plant's fuel cycle) with *Bioenergy Guidance*, *supra* note 83, at 1 (disclaiming any effect that formally adopted regulations would have). *Christensen* also would support that the EPA's Bioenergy Guidance is not entitled to deference under *Chevron* by virtue of the fact that rulemaking procedures were not followed but would instead afford the Bioenergy Guidance persuasive "respect" per *Skidmore*. *Christensen v. Harris Cty.*, 529 U.S. 576, 587 (2000) (carving back application of *Chevron* for various EPA interpretations).

172. See *Bioenergy Guidance*, *supra* note 83, at 1, 23 (describing non-legally binding nature of guidance). For a detailed discussion of standards of review of agency actions including *Chevron* and *Mead*, see *supra* notes 106-127 and accompanying text.

173. See *United States v. Mead Corp.* 533 U.S. 218, 234 (2001) (declining to treat classification decisions as rules properly promulgated and having force of law); see also *Skidmore v. Swift & Co.*, 323 U.S. 134 at 140 (1944) (discussing lesser standard of deference granted in circumstances where *Chevron* does not apply).

174. See *Skidmore*, 323 U.S. 134 at 140; see *Womack*, *supra* note 115, at 294-95 (acknowledging that *Skidmore*, the default standard of review following *Chevron* and *Mead*, generally affords less deference and more discretion to judges).

same footing as did *Baltimore Gas & Electric*, which would require the granting of less deference to the agency's findings.¹⁷⁵

B. The Court's Failure to Adequately Address Differences Among Biomass Fuel Stocks

While the Ninth Circuit acknowledged that the EPA did not consider the ramifications of burning different types of biomass stocks in step one as petitioners claimed it should have, and correctly pointed to the EPA's pending, yet incomplete research on the matter, the court proceeded to make ill-advised claims that the EPA and Sierra Pacific had engaged in discourse that justified the absence of material restrictions on the source operator with respect to the types of biomass wastes that could be used.¹⁷⁶ Seemingly rewarding Sierra Pacific's self-imposed restrictions on the types of biomass stocks available for consumption, the court never acknowledged that Sierra Pacific's sacrifice was hardly altruistic.¹⁷⁷ Rather, Sierra Pacific had little to gain by obtaining permission to burn merchantable forest biomass or whole trees removed through clear-cutting because additional forest and mill residues brought from other mills in the region would allow Sierra Pacific to run the power plant closer to capacity.¹⁷⁸ The court pointed to the less urgent concern that Sierra Pacific would clear-cut forests solely for the purpose of converting wood into electricity and firing its drying kiln.¹⁷⁹ While well-intentioned, it remains unlikely that Sierra Pacific would engage in clear-cutting because its main avenue of business is producing lumber, not electricity.¹⁸⁰ Indeed, arguments made at public comment early in the application stage indicated

175. See *Bioenergy Guidance*, *supra* note 83, at 23-27 (relying on public comments to discuss methods of burning by which biomass could be carbon neutral). The EPA inasmuch acknowledged the impracticality of collecting supporting data: "a case-by-case analysis of the net atmospheric impact of biomass fuels would likely be prohibitively time-consuming and complex for facilities and permitting authorities." *Id.* at 23.

176. See *Helping Hand Tools*, 848 F.3d at 1200-01 (failing to recognize EPA's issue permit imposed no restrictions on Sierra Pacific's usage of certain biomass stocks).

177. For a discussion of facts leading to the EPA's amendment of Sierra Pacific's PSD permit, see *supra* notes 17-36 and accompanying text.

178. For a discussion on Sierra Pacific's available biomass stocks, see *supra* notes 21-22 and accompanying text.

179. *Helping Hand Tools*, 848 F.3d at 1201 (drawing attention to petitioners' less dire underlying concern that Sierra Pacific would engage in unscrupulous slash-and-burn practices); see also *id.* at 1193 (describing Sierra Pacific's "basic business purpose").

180. For a brief overview of Sierra Pacific's business activities, see *supra* notes 20-21 and accompanying text.

that the plant would serve to protect the community as well as Sierra Pacific's lumber stocks by reducing wildfire risk and making use of combustible wood waste on the forest floor.¹⁸¹

These facts gain relevance in light of the absence of any restriction on the proportion of consumed biomass that must be comprised of mill residues.¹⁸² The EPA promulgated its Biogenic BACT guidance in response to its own preliminary conclusion that burning mill residues evidences an overall neutral effect on atmospheric carbon dioxide levels. It thus follows that the EPA would desire to ensure that at least some of the biomass burned under permits issued according to its new guidance were mill residues.¹⁸³ Even though the EPA specifically noted in its guidance that further research was required before it could reach similar conclusions with respect to other types of biomass stocks, it permitted burning of other biomass stocks with no accompanying effort to ensure that greenhouse gas emissions were minimized.¹⁸⁴

VI. IMPACT

The immediate result of *Helping Hand Tools* is a hard-fought victory for lumber manufacturers, power companies, and biomass industrialists in general.¹⁸⁵ As applied in the context of "dirty fuels" such as coal, the source redefinition exception affords great power to permit applicants who seek to co-locate power generation facilities with fuel sources.¹⁸⁶ By adopting the exception at the appellate

181. See *Public Meeting: Receiving Public Comments on the Proposed Permit Modification of EPA's Proposed PSD Permit for the Sierra Pacific Industries – Anderson Division*, U.S. ENVTL. PROT. AGENCY 12-14 (Dec. 10, 2013), <https://www.regulations.gov/contentStreamer?documentId=EPA-R09-OAR-2012-0634-0041&attachmentNumber=51&contentType=pdf> (detailing concerns over potential for controlled fires to burn out of control when set ablaze in midst of forest rather than at specialized biomass-burning facilities). For further explanation of Sierra Pacific's motivations for building the facility, see *supra* notes 24-26 and accompanying text.

182. See *Prevention of Significant Deterioration Permit Proposed Pursuant to the Requirements at 40 CFR § 52.21*, U.S. ENVTL. PROT. AGENCY, REGION IX, 11-12 (Apr. 2014), <http://www.treasurer.ca.gov/cpcfa/meeting/2014/20140916/staff/5e2.pdf> [hereinafter Final Permit] (failing to require mill residue fuel quota).

183. See *Bioenergy Guidance*, *supra* note 83, at 23-24 (specifying that agency extended interim policy statement only to mill residues).

184. See *id.* at 24 (qualifying statements regarding beneficial aspects of burning biomass stocks); see also Final Permit, *supra* note 182, at 11-12 (permitting unrestrained use of fuel sources other than mill residues).

185. See Basu, *supra* note 6 (describing advocates' push for formal government recognition of forest bioenergy as carbon-neutral fuel source).

186. See generally *Prairie State*, 13 E.A.D. 1, 18-19 (EAB 2006) (upholding practice of deferring to permit applicant's own definition of proposed facility's design or business purpose); see also *Sierra Club*, 499 F.3d at 655 (declining, with caution, to override EAB's acceptance of applicant's project definition in *Prairie State*).

level, the court reduces source operators' burdens for project planning at the expense of in-depth determinations of BACT, and ensures at least some security from EPA's demands for usage of alternative fuels.¹⁸⁷ Essentially, *Helping Hand Tools* espouses rationale that ensures limited freedom from regulation for biomass-burning facilities, notwithstanding the indefinite absence of any scientific affirmation of biomass's carbon-neutrality.¹⁸⁸

In contrast, the decision on petitioners' challenge of the Bioenergy BACT Guidance represents a decisive defeat for academics and environmentalists who object to cavalier pronouncements of biomass-burning practices as broadly effective means of reducing the country's carbon footprint.¹⁸⁹ While detractors have time remaining to challenge a binding adoption of such determinations in legislation, the Ninth Circuit's ruling places biomass facility operators beyond the purview of their objection in the interim.¹⁹⁰ Furthermore, the court's decision to apply *Baltimore Gas & Electric* here lowers the bar for what constitutes agency action "at the frontiers of science."¹⁹¹ The operative effect of the court's second holding is to allow the EPA wide discretion in (1) broadcasting preliminary determinations in the first place while remaining unbound by formal rulemaking procedures and (2) preserving these determinations by committing to a lengthy process of scientific verification.¹⁹² It remains unclear whether the court's hands-off approach was motivated by a desire to abstain from the greater biomass-burning debate; nevertheless, while courts could previously rationalize agency policy statements where the scientific record was "persuasive" under *Skidmore*, courts now also have a proper basis for engag-

187. For a discussion of the EPA's 2010 and 2011 modifications to the BACT analysis for biogenic carbon dioxide, see *supra* notes 80-94 and accompanying text.

188. For an overview of the discussion of the level of scientific support necessary to afford deference to agency determinations, see *supra* notes 121-127 and accompanying text.

189. See Basu, *supra* note 6 (noting mixed, yet fervent opposition and support from opposite sides of academic community).

190. See *id.* (relaying that pending legislation would define biomass-burning as carbon-neutral).

191. See Meazell, *supra* note 126, at 751-52, 761 (describing recurring danger of "science charade" spurred by "super deference" principles adopted by the Court over time). For a further discussion of the jurisprudence of the applicable standard where an agency makes use of its unique expertise, see *supra* notes 121-127 and accompanying text.

192. See *generally* *Helping Hand Tools v. U.S. Env'tl. Prot. Agency*, 848 F.3d 1185, 1199-1200 (9th Cir. 2016) (recognizing that at time of Court's decision EPA had yet to complete research into accounting methods for biogenic carbon emissions).

ing in passive activism where an agency merely believes it could justify the policy in the future.¹⁹³

Although it also remains to be seen whether the disposition of *Helping Hand Tools* will, in fact, lead to a net reduction of carbon dioxide emissions as supporters of biogenic energy propose, the immediate effect of the Ninth Circuit's decision is to engender disapproval of judicial oversight at the intersection between law and science.¹⁹⁴ Such oversight is necessary to balance "the risks that flow from technological decisions."¹⁹⁵ In the context of biomass-burning, the potential risk is that agencies will adopt policies mistakenly encouraging biomass-burning to the detriment of the public health they sought to advance.¹⁹⁶ Not only is this risk exacerbated by the mischaracterization of policy as science, but it is also made more severe by courts' unwillingness to identify unsupported assertions of a technical nature.¹⁹⁷ *Helping Hand Tools* thus stands as an impetus for courts hearing similar cases in the future to give agency determinations undeserved deference.¹⁹⁸

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193. *See id.* (expressing doubt as to whether guidance would qualify for deference). For further explanation of the applicable standard where the agency acts according to its own specialized knowledge, see *supra* notes 121-127 and accompanying text.

194. *See* Joel Yellin, *High Technology and the Courts: Nuclear Power and the Need for Institutional Reform*, 94 HARV. L. REV. 489, 489-91 (1981) (explaining, in context of nuclear power, tension between technological advancement and judiciary's tempering such advancement pursuant to duties of oversight). "If the courts fail to understand the intertwined procedural and technological dimensions of [cases involving complex and novel technology], the judicial process becomes a lottery in which outcomes ultimately are determined by intuitive perceptions of the weight of authority, rather than by reasoning from evidence." *Id.* at 491.

195. *Id.* at 490 (warning of circumstances in which "technological enthusiasm . . . overshadows[s] the constraints of legislative oversight and safety regulations").

196. *See generally* Basu, *supra* note 6 (pointing to concerns over "legislat[ing] scientific fact[s]" based upon newly gleaned knowledge of a nuanced field).

197. *See* Meazell, *supra* note 126, at 751-52 (warning against both inadvertent and intentional characterizations of policy as science). Critics posit that "If agencies know that courts will be at their most deferential when reviewing scientific determinations, they will rationally emphasize the scientific aspects of their decisions to the detriment of clearly identifying the policy decisions filling the scientific gaps." *Id.* at 752.

198. For an examination of how the Ninth Circuit in *Helping Hand Tools* afforded undue deference to the EPA's treatment of bioenergy sources, see *supra* notes 163-175.

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