



4-1-2016

Assessing the EPA's Authority to Regulate Greenhouse Gas Emissions under Clear Air Act Section 111(D) and the Clean Power Plan

Rick A. Waltman

Follow this and additional works at: <https://digitalcommons.law.villanova.edu/elj>



Part of the [Energy and Utilities Law Commons](#), [Environmental Law Commons](#), and the [Natural Resources Law Commons](#)

Recommended Citation

Rick A. Waltman, *Assessing the EPA's Authority to Regulate Greenhouse Gas Emissions under Clear Air Act Section 111(D) and the Clean Power Plan*, 27 Vill. Envtl. L.J. 35 (2016).

Available at: <https://digitalcommons.law.villanova.edu/elj/vol27/iss1/2>

This Article is brought to you for free and open access by Villanova University Charles Widger School of Law Digital Repository. It has been accepted for inclusion in Villanova Environmental Law Journal by an authorized editor of Villanova University Charles Widger School of Law Digital Repository.

2016]

ASSESSING THE EPA'S AUTHORITY TO REGULATE
GREENHOUSE GAS EMISSIONS UNDER CLEAN AIR ACT
SECTION 111(D) AND THE CLEAN POWER PLAN

RICK A. WALTMAN†

I. INTRODUCTION

Increasing greenhouse gas (GHG) concentrations evoke world-wide concern over climate change.¹ Until recently, the United States had no federal action aimed at curbing the nation's share of GHG output.² In *Massachusetts v. EPA* the Supreme Court compelled the Environmental Protection Agency (EPA) to determine whether mobile GHG emissions "endanger the public health and welfare" and should be regulated. After the Supreme Court's 2007 *Massachusetts v. EPA* decision, the EPA has promulgated regulations for regulating both mobile (cars, trucks, etc.) and stationary source (power plants) GHGs.³ The EPA's stationary source regulations include a controversial regulation promulgated in August 2015, which targets existing stationary GHG sources under section 111(d) of the Clean Air Act (CAA).⁴

The EPA's newest and most controversial regulation, known as the Clean Power Plan, was proposed on June 2, 2014.⁵ The EPA released its final version of the Clean Power Plan on August 3, 2015 after receiving and considering millions of comments from state governments, industry leaders, and advocacy groups.⁶ The EPA's

† Independent Energy Attorney; J.D., 2015, University of San Diego School of Law; B.S., 2010, University of Minnesota.

1. See *Fifth Assessment Report*, IPCC (2014), available at www.ipcc.ch (discussing causes, impacts, and trajectory of climate change in a global meta analysis).

2. See *Massachusetts v. EPA*, 549 U.S. 497, 511 (2007) (considering GHG regulations for first time).

3. See *Util. Air Regulatory Group v. Env'tl. Prot. Agency*, 134 S.Ct. 2427 (2014) [hereinafter *UARG*] (upholding in part, and denying in part, regulations under Section 108 and Title V of Clean Air Act).

4. See *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, EPA (2014), available at <https://web.archive.org/web/20140602231412/http://www2.epa.gov/sites/production/files/2014-05/documents/20140602proposal-cleanpowerplan.pdf> (providing EPA's statutory source regulations).

5. See *id.* (discussing EPA's new Clean Power Plan).

6. See *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 40 CRF 60 (Dec. 10, 2015) [hereinafter *Clean Power Plan*], available at www2.epa.gov/sites/production/files/2015-08/documents/cpp-final-rule.pdf (providing EPA promulgating final rule, and subject of Section III of this

new Clean Power Plan allows states to use a range of methods to meet their “best system of emissions reduction” (BSER) targets such as efficiency improvements in older power plants, “environmental dispatch,” alternative fuel generation, and demand-side energy efficiency measures.⁷ The EPA’s Clean Power Plan specifically focuses on electric plant generation emissions because they produce forty percent of the nation’s overall GHG emissions.⁸ Environmental supporters and industrial opponents challenging the Clean Power Plan claim it does not go far enough and forces potential litigants to challenge many of EPA’s interpretations and determinations made in the final regulation.⁹

This article will begin by discussing the EPA’s history of regulating GHGs under the CAA in Section II, specifically focusing on the Supreme Court’s discussion of the EPA’s CAA authority. This article will continue in Section III by assessing the EPA’s authority to regulate GHGs specifically under CAA section 111(d). Section IV outlines the Clean Power Plan’s main components and also addresses opponents’ arguments about the EPA’s faulty interpretations, inconclusive feasibility studies, and the poor fact-finding made in promulgating the final rule. Finally, this article concludes by affirming the EPA’s interpretation of its statutory authority under CAA 111(d) permitting it to regulate GHG emissions from electricity generating units (EGUs) and how litigants challenging the Clean Power Plan will most likely fail.¹⁰

article); *see also* *The Clean Power Plan, Key Changes and Improvements from Proposal to Final*, EPA (Dec. 10, 2015), www2.epa.gov/sites/production/files/2015-08/documents/fs-cpp-key-changes.pdf [hereinafter *Key Changes and Improvements*] (discussing subject matter of some comments in context of resulting final rule); *see also* *Study: Clean Power Plan Could Save Thousands of Lives*, U.S. NEWS & WORLD REPORT (May 4, 2015), www.usnews.com/news/articles/2015/05/04/epa-clean-power-plan-could-save-3-500-lives-a-year-study-says (highlighting that “The Clean Power Plan attracted more than 4.3 million public comments to the EPA.”).

7. *See EPA Fact Sheet—Cutting Carbon Pollution from Power Plants*, EPA (June 2, 2014), <http://www.epa.gov/cleanpowerplan/fact-sheet-clean-power-plan-numbers> [hereinafter *Clean Power Plan Fact Sheet*] (stating that agency expects that satisfaction of all states’ carbon reduction goals will yield a reduction of roughly 870 million tons of carbon by 2030); *see also* *Key Changes and Improvements*, *supra* note 6 (discussing three “building blocks” comprising BSER in final Clean Power Plan).

8. *See* John M. Broder, *Obama Readying Emissions Limits on Power Plants*, N.Y. TIMES (June 19, 2013), www.nytimes.com/2013/06/20/science/earth/obama-preparing-big-effort-to-curb-climate-change.html?_r=1& (discussing reasons that President Obama and advocates called for creation of Clean Power Plan, and opponents’ concerns over its potential economic effects).

9. *See infra* notes 134–144 and accompanying text for a discussion of the arguments already being made against the Clean Power Plan.

10. *See infra* notes 33–59 for a discussion of *Util. Air Regulatory Group* and concerns over regulating GHGs under the CAA section 111(d). No plants will know if

II. THE EPA'S HISTORY OF GREENHOUSE GAS REGULATION

A. *Massachusetts v. EPA*: Whether Greenhouse Gas Emissions Endanger Public Health and Welfare

Until September 8, 2003, the EPA never made a decision to regulate GHGs.¹¹ That day, however, the agency denied a rulemaking petition that encouraged the EPA to regulate GHGs through the CAA because the EPA claimed it did not have the statutory authority under the CAA and because promulgating these types of regulations “would be unwise . . . at this time.”¹² Opponents who disagreed with the EPA's conclusions—consisting of intervener states, local governments, and environmental advocacy groups—filed a petition with the D.C. Circuit asking the court to review the EPA's decision to forego determining whether carbon dioxide was an “air pollutant” which may “reasonably be anticipated to endanger public health or welfare.”¹³ The D.C. Circuit denied opponents petition, but the Supreme Court granted certiorari.¹⁴

The Supreme Court disagreed with the D.C. Circuit and remanded the matter to the EPA, requiring the agency to conduct a finding of whether carbon dioxide endangered the public health or welfare.¹⁵ The Court reached this conclusion by finding that carbon dioxide fit within the CAA's definition of “air pollutant.”¹⁶ Justice Stevens' majority heavily scrutinized the EPA claiming it did not have to regulate mobile carbon emissions because vehicle emissions are already subject to regulation by the Department of Transportation's CAFE standards.¹⁷ The majority complained about the EPA “shirk[ing] its environmental responsibilities” by failing to make an “endangerment finding” regarding carbon dioxide.¹⁸ The majority opinion also found the EPA Administrator failed to com-

they have to undergo a “fundamental redesign” until their state passes their own standards. See *infra* notes 120-124 for further discussion of these standards.

11. See *Massachusetts*, 549 U.S. at 511 (discussing EPA shirking its responsibilities of regulating GHGs).

12. See *id.* at 511 (providing that at time, the EPA did not believe it had statutory authority to do so).

13. See *id.* (discussing appeal); see also 42 U.S.C. § 7521(a)(1) (providing CAA section that requires EPA administrator to make such findings).

14. See *Massachusetts*, 433 F.3d at 514-15 (denying a petition for a hearing in front of en banc panel).

15. See *id.* at 535 (reaching a holding requiring a case remand).

16. See *id.* at 514 (holding that carbon dioxide is an air pollutant).

17. See *id.* at 531-32 (highlighting how motor vehicles follow their own GHG emission standards).

18. See *id.* (detailing how EPA avoided taking responsibility). “The two obligations may overlap, but there is no reason to think the two agencies cannot both administer their obligations and yet avoid inconsistency.” *Id.* at 32.

ply with the CAA requirements, because clear evidence supported making an endangerment finding on carbon dioxide.¹⁹ The Court resolved the EPA's dispute over its CAA authority using *Chevron's* two-step framework, stopping after the first step because the CAA was "unambiguous" requiring the EPA to regulate dangerous pollutants.²⁰ The Majority finally required the EPA to determine whether carbon dioxide actually endangers public welfare.²¹

As a result of this Supreme Court holding, the EPA took its first steps in combating GHG emissions by making an endangerment finding on carbon dioxide.²² The EPA endangerment finding on carbon dioxide has subsequently been challenged in the D.C. Circuit, and the court upheld the EPA's conclusion; noting that carbon dioxide emissions "may reasonably be anticipated both to endanger public health and to endanger public welfare."²³ Following the D.C. Circuit's challenges to the EPA's endangerment finding on carbon dioxide, questions remained regarding the scope of the EPA's duties under the CAA and whether CAA section 202 requires the EPA to interpret the term "air pollutant" for all other CAA provisions. The Supreme Court partially answered this question in *American Electric Producers v. EPA*, and subsequently provided greater detail in *United Air Regulatory Group v. EPA*.

B. *American Electric Power Co. v. Connecticut* Displaces the Right of Private Citizens to Bring Federal Common Law Claims

Three years after *Massachusetts v. EPA*, the Supreme Court held in *American Electric Power Co. v. Connecticut* that federal common law does not give citizens the right to sue corporations for emitting

19. See *id.* (providing EPA's actions were arbitrary and capricious). In short, the EPA has offered no reasoned explanation for its refusal to decide whether greenhouse gases cause or contribute to climate change. Its action was therefore "arbitrary, capricious, . . . or otherwise not in accordance with law. 42 U.S.C. § 7607(d)(9)(A)." *Id.* at 34.

20. See *Chevron U.S.A. Inc. v. Nat. Res.s Defense Council, Inc.*, 467 U.S. 837, 842-43 (1984) (providing basis for how Court analyzes agency statutory questions). Under *Chevron*, the Court determines first whether the statute is ambiguous. If, and only if, the statute is ambiguous, the Court then asks whether the agency's interpretation is reasonable. *Id.*

21. See *Massachusetts*, 549 U.S. at 534 (providing under *Chevron*, EPA has to determine whether carbon dioxide actually endangers public welfare).

22. See *Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the CAA*, EPA, www.epa.gov/climatechange/endangerment/ (last visited on Dec. 10, 2015) (finding that GHGs endanger public health and welfare).

23. See *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 122-23 (D.C. Cir. 2012) (explaining how Supreme Court denied petitions for writ of certiorari challenging EPA's CAA section 202 endangerment finding).

GHGs.²⁴ In this case, a unanimous Supreme Court reasoned that the CAA delegates all GHG emissions management to the EPA.²⁵

To provide some context, *American Electric Power Co. v. Connecticut*'s story starts in 2004 in the United States District Court for the Southern District of New York.²⁶ The case's litigants brought the first public nuisance claim for global warming, but the S.D.N.Y. court dismissed the suit finding federal common law claims as "non-justiciable" under the political question doctrine (the doctrine that Congress, and not courts are better suited to handle controversial subjects like these).²⁷ The Second Circuit, however, disagreed holding that plaintiffs in the case had sufficiently pled Article III standing and could bring the claim.²⁸

To resolve this dispute, the Supreme Court granted certiorari and held that only the EPA has the authority to issue emissions regulations.²⁹ The Court also held the EPA's authority displaces any federal common law right to any claims that may have existed.³⁰ Justice Ginsberg's majority opinion stated "[i]t is altogether fitting that Congress designated an expert agency, here, the EPA, as best suited to serve as primary regulator of greenhouse gas emissions."³¹ The majority opinion also contemplated the EPA's authority for GHG regulation primarily under CAA section 111(d).³² While the Supreme Court has never explicitly found statutory authority for the EPA to regulate GHG emissions under CAA section 111(d), the Court recently decided a case that previews how they might decide.

24. See *Am. Elec. Power Co. v. Connecticut*, 131 S. Ct. 2527 (2010) (holding citizens have no right to sue corporations emitting GHGs).

25. See *id.* at 2539 (holding EPA retains exclusive rights to regulate GHG emissions).

26. See *id.* at 2533 (discussing procedural results case).

27. See *id.* at 2534 (providing district court's reasoning for dismissing suit).

28. See *id.* (explaining how case eventually made it up Supreme Court).

29. See *Am. Elec. Power Co.*, 131 S. Ct. at 2539 ("The Clean Air Act entrusts such complex balancing to EPA in the first instance.").

30. See *id.* at 2537 (holding that a claim of nuisance was "displaced by federal legislation authorizing EPA to regulate carbon-dioxide emissions.").

31. See *id.* at 2539 (highlighting Justice Ginsberg mentioning EPA is perfectly designed for job).

32. See *id.* at 2527, 2537–38 (referencing CAA 111(b) and 111(d) as examples of where the EPA is entrusted to deal with decisions regarding pollutants, including GHGs).

40 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

C. *Utility Air Regulatory Group v. Environmental Protection* and the Meanings of Air Pollutants

On January 2, 2011, the EPA promulgated new regulations applicable to all stationary sources of GHGs under its CAA authority.³³ In issuing these regulations, the EPA planned to tailor its programs based on GHGs, rather than specific GHG outputs so the new regulations reached more than “a relatively small number of large industrial sources.”³⁴

In response to these new EPA regulations, a number of states and industrial groups petitioned the D.C. Circuit for administrative writ.³⁵ The petitioners challenged: (1) the EPA’s determination that GHGs may “reasonably be anticipated to endanger public health or welfare”; (2) the agency’s GHG emissions standards for cars and light trucks; and (3) the Title V and section 108 stationary source regulations.³⁶ The D.C. Circuit upheld: (1) the EPA’s “Endangerment Finding” and the section 108 “Best Available Control Technology” (BACT) standards for Prevention of Significant Deterioration (PSD) permittees; (2) found that the CAA compelled the EPA to apply PSD permitting requirements to GHGs as “any regulated air pollutant”; and (3) held that the petitioners lacked Article III standing to challenge the PSD and Title V Triggering and Tailoring Rules.³⁷ The D.C. Circuit also denied the plaintiffs’ petition for a rehearing *en banc*.³⁸

On June 23, 2014, the Supreme Court granted certiorari on only one issue: “[w]hether the EPA permissibly determined that its regulation of greenhouse gas emissions from new motor vehicles triggered permitting requirements under the Clean Air Act for sta-

33. See *Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule*, 75 Fed. Reg. 31,514, 31,516 (June 3, 2010) (codified at 40 C.F.R. pts. 50, 51, 70, and 71) [hereinafter the Tailoring Rule] (codifying EPA’s new tailoring rule).

34. See Tailoring Rule, *supra* note 33 (discussing EPA’s new thought processes behind tailoring rule).

35. See *Coalition for Responsible Regulation, Inc.*, 684 F.3d at 113 (providing a case where plaintiff’s challenged EPA’s new regulations).

36. See *id.* at 113 (citing different reasons petitioners challenged the EPA’s conclusions).

37. See *id.* at 119, 126, 137 (upholding EPA’s “Endangerment Finding” and section 108 “Best Available Control Technology” (BACT) standards for PSD permittees); see also *id.* at 133–34 (finding that CAA compelled EPA to apply PSD permitting requirement to GHGs as “any regulated air pollutant”); see also *id.* at 136 (holding that petitioners lacked standing).

38. See No. 09-1322 (Dec. 20, 2012), available at 2012 WL 6621785 (denying the petitioners rehearing *en banc*).

tionary sources that emit greenhouse gas.”³⁹ The Court first decided the EPA impermissibly “determined that a source may be subject to the PSD and Title V permitting requirements on the sole basis of the source’s potential to emit greenhouse gases.”⁴⁰ Next, the Court held that the “EPA permissibly determined that a source already subject to the PSD program because of its emission of conventional pollutants . . . may be required to limit its [GHG] emissions by employing the [BACT] for [GHGs].”⁴¹

Justice Scalia’s majority opinion in the case focused on the CAA’s statutory language and its parameters for “triggering” the CAA’s permitting requirements.⁴² The CAA as a statute requires states to undergo a PSD permitting process for stationary sources that have “the potential to emit 250 tons per year of any air pollutant,” with a lesser limit of “100 tons per year” for specified sources under Title V.⁴³ The EPA contended that GHG emissions tend to be much stronger and broader than conventional pollutant emissions, which therefore should extend the EPA’s CAA jurisdiction to “numerous small sources not previously regulated under the Act.”⁴⁴ The Court, however, disagreed with the EPA extending its CAA authority and held that the EPA’s actions violated *Chevron* because the agency tailored its “bureaucratic policy goals by rewriting unambiguous statutory terms.”⁴⁵ The Court also held that even if the CAA’s permitting provisions’ were ambiguous, the EPA unreasonably interpreted the Act because it allowed a regulatory reset of

39. *See Util. Air Regulatory Group*, 134 S. Ct. at 2438 (detailing the question the court would resolve).

40. *See id.* (providing that not all GHG emitting sources can be subject to permitting requirements). The statutory language provides otherwise. *Id.*

41. *See id.* (holding EPA may use BACT standards to limit GHGs from all sources).

42. *See id.* at 2437 (discussing numeric thresholds of 100 tons per year and 250 tons per year under Title V and PSD programs).

43. *See* 42 U.S.C. § 7401 et seq. (showing EPA’s statutorily required permitting processes).

44. *See* 75 Fed. Reg. 44,355 (determining that GHG output is usually “orders of magnitude” greater than output of conventional pollutants); *see also Util. Air Regulatory Group*, 134 S. Ct. at 2438 (agreeing with EPA that regulating GHGs using same numeric thresholds for GHGs as for other criteria pollutants would dramatically increase EPA’s reach to emitting facilities). The EPA projected that the permit requirement would extend to “smaller industrial sources, large office and residential buildings, hotels, large retail establishments, and similar facilities.” *See* 75 Fed. Reg. 444908, 44499 (discussing expansion of permitting programs). This expansion, according to EPA estimates, would remain “relatively ineffective at reducing greenhouse gas concentrations.” *Id.*

45. *See Util. Air Regulatory Group*, 134 S. Ct. at 2445 (finding a violation of *Chevron*, step one).

42 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

the statutory thresholds for air pollutants.⁴⁶ In making these overly broad interpretations, the Court found the EPA failed to resolve any ambiguity “within the bounds of its statutory authority.”⁴⁷

The majority also held the EPA went too far because the CAA’s statutory language already refers to certain pollutants.⁴⁸ The Court held, in trying to cater the permitting triggers to reasonably apply to GHGs, the EPA ignored the CAA’s specific numeric thresholds.⁴⁹ The Court also held that including GHGs in the definition of “any air pollutant” would “radically expand those [permitting] programs, making them both unadministrable and unrecognizable to the Congress that designed them.”⁵⁰ Therefore, under the Court’s reasoning, if an entity is not otherwise subject to PSD or Title V permits based on the CAA’s six enumerated “criteria pollutants,” the EPA has no authority to affect its GHG output through use of permits.⁵¹ Alternatively, sources already subject to PSD or Title V permitting requirements—or “anyway” sources—are properly subject to the EPA’s BACT state guidelines.⁵²

For parties seeking insight into how the Court will analyze future CAA regulations, the Court discussed that regulation of GHGs through BACT state guidelines is proper because “the text of the BACT provision is far less open-ended than the text of the PSD and Title V permitting triggers.”⁵³ Moreover, the Court found BACT more appropriate for regulating GHG emissions from “anyway” sources because: (1) BACT requirements cannot demand a “funda-

46. *See id.* at 2438 (noting EPA’s unreasonable interpretation of its guiding statutory authority). The language of the Administrative Procedure Act prompts courts to analyze whether the agency decision is “arbitrary and capricious” in section 706(2)(A). *Id.* Justice Scalia, writing for the Court, conceded, “[t]o be sure, Congress’s profligate use of “air pollutant” where what it meant is obviously narrower than the Act-wide definition is not conducive to clarity.” *Id.* at 2441.

47. *See id.* (citing *City of Arlington v. FCC*, 133 S. Ct. 1863 (2013) (discussing an overly broad statutory interpretation under *Chevron*).

48. *See id.* at 2438 (holding that statutory language did not allow EPA to go this far).

49. *See* Tailoring Rule, *supra* note 33 (setting regulatory thresholds for GHGs that conflict with those criteria pollutants in Title V and PSD permitting).

50. *See Util. Air Regulatory Group*, 134 S. Ct. at 2438 (providing that Congress did not want the EPA to expand its permitting authority).

51. *See id.* (discussing EPA’s limited permitting authority).

52. *See id.* (emphasizing that these “anyway” sources comprise 83 percent of all GHG emissions). Non-“anyway” stationary sources make up only three percent of total GHG emissions. *Id.*

53. *See* § 7475(a)(4) (providing a different basis for how Court will analyze CAA regulations). The Clean Air Act states that BACT is required “for each pollutant subject to regulation under this chapter [the entire Act].” *Id.* In contrast to automatic thresholds for PSD and Title V permits, BACT gives states discretion over which sources to regulate. *Id.*

mental redesign” of facilities; (2) the EPA has long interpreted BACT so as to consider “whether a proposed regulatory burden outweighs any reduction in emissions to be achieved”; and (3) regulations of GHGs through BACT requirements are “not so disastrously unworkable” so as to result in “a dramatic expansion of agency authority.⁵⁴ For these reasons, the Court held the EPA’s interpretation of its authority to regulate GHGs through its BACT standards was reasonable.⁵⁵

The Court in *UARG v. EPA* assessed the EPA finding statutory authority to regulate GHGs based upon the CAA’s text, statutory history, regulatory concerns, and practical effects.⁵⁶ Specifically, the Court first addressed the CAA’s PSD and Title V provisions and found they gave the EPA no authority to regulate GHGs as a result of the triggering language considered through the legislative history.⁵⁷ The Court next contrasted the CAA’s impermissible section 108 and Title V permit regulations with the permissible BACT GHG regulations by considering their practical differences based on their: (1) burdens to facilities; (2) extent of the EPA and state regulatory burden compared to expected regulatory benefits; (3) and administrative viability.⁵⁸ Following *UARG v. EPA*, any serious legal practitioner addressing the EPA’s authority to regulate GHGs should follow the majority’s analytical approach.⁵⁹

54. See *Util. Air Regulatory Group*, 134 S. Ct. at 2448 (providing Court’s discussion of the EPA’s statutory authority). “We are not talking about extending EPA jurisdiction over millions of previously unregulated entities, but about moderately increasing the demands [on those] already subject to regulation.” *Id.*

55. *Id.* (holding EPA’s interpretation of its statutory authority was permissible).

56. See *supra* notes 42–55 and accompanying text for Supreme Court’s discussion of CAA’s statutory history, regulatory concerns, and practical effects.

57. See *supra* notes 42–49 and accompanying text for a discussion of Title V and Section 108 language.

58. See *supra* notes 52–55 and accompanying text for a discussion of the practical effects of BACT standards versus Title V and PSD standards.

59. See Michael Sinclair, *Precedent, Super-Precedent*, 14 GEO. MASON L. REV. 363, 368 (2007) (“Decisions under statutes may be treated to a stricter doctrine of precedent because legislative correction is simple and readily available”). At the very least, plans that don’t require “fundamental redesigns,” include cost benefit analysis, and don’t drastically increase the number of regulated facilities, will be more likely to survive judicial scrutiny. *Id.*

III. EPA'S AUTHORITY TO REGULATE GHGS UNDER CAA SECTION 111(D)

In 1970, Congress enacted CAA section 111(d) as a “backstop” to catch any pollution the Act does not otherwise target.⁶⁰ Under section 111(b), the EPA sets pollution standards for a category of *new* sources that it finds “significantly contribute” to air pollution that “endangers public health or welfare.”⁶¹ Then, the EPA sets guidelines under section 111(d) for unregulated pollution from *existing* sources in that same category.⁶² CAA section 111 also requires states to implement enforceable standards and “adequately demonstrate” their equivalence to “the best system of emissions reduction” (BSER), as determined by the EPA Administrator.⁶³ Section 111(d) is also a viable source of statutory authority permitting the EPA to regulate stationary sources of GHGs because the EPA can reasonably read section 111(d) to apply broadly to existing sources of GHGs and, section 111 is a reasonable choice for regulating stationary sources of existing GHGs in an efficient, effective, and flexible way.⁶⁴

60. See Kate Konschnik, *EPA's 111(d) Authority - Follow Homer and Avoid the Sirens*, LEGAL PLANET (May 28, 2014), legal-planet.org/2014/05/28/guest-blogger-kate-konschnik-epas-111d-authority-follow-homer-and-avoid-the-sirens/ (providing that section 111 may give the EPA authority to regulate pollutants that are neither regulated as criteria pollutants under section 108(a) nor as hazardous air pollutants (HAPs) under section 112 of the Act).

61. See CAA § 111(b)(1)(A) (providing relevant statutory language). According to the Supreme Court in *Massachusetts* and *UARG*, this same language allows the EPA to regulate GHGs under CAA section 202.

62. See 42 U.S.C. § 4711 (d) (1970) (displaying the basis for EPA's guidelines); see also Konschnik, *supra* note 60 (discussing framework of CAA section 111, where subsection (b) addresses regulation of new sources and subsection (d) involves same for existing sources).

63. See CAA § 111(a)(1) (providing that states have an important role). Under section 111(c), states are free to propose plans to implement and enforce the new source standards created by EPA. 42 U.S.C. § 7521(a) (noting Administrator should prescribe regulations of motor vehicle emissions that endanger public health or welfare).

64. See *Am. Elec. Power Co.*, 131 S. Ct. at 2537–38 (holding that section 111, including section 111(d), applies to carbon dioxide emissions from those sources). Further, there is broad agreement among legal academia and industry experts that the EPA can effectively curb GHG emissions under section 111 of the Act. See Gregory E. Wannier, et al., *Prevailing Academic View on Compliance Flexibility under section 111 of the CAA*, RESOURCES FOR THE FUTURE (July 2011), www.rff.org/RFF/Documents/RFF-DP-11-29.pdf (discussing almost unanimous consensus that section 111 is EPA's key to regulating stationary GHG sources).

A. The EPA Can Reasonably Interpret the Text of Section 111(d) to Apply to GHG Sources

The Supreme Court allowed the EPA to regulate GHGs under CAA section 202. The Court will likely allow the EPA to regulate GHGs under section 111's almost identical language.⁶⁵ The Senate and House of Representatives conflicting versions of section 111 will not likely render either interpretation unreasonable.⁶⁶

1. *Section 111(b)'s prompting language is the same broad statutory language as section 202*

Section 111(b)(1)(A) prompts the EPA Administrator to regulate a category of sources under section 111(d) if, “in his [or her] judgment [it] causes, or contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare.”⁶⁷ In *Massachusetts v. EPA*, the Supreme Court held that the EPA could reasonably interpret similar language under section 202—“[t]he Administrator shall . . . prescribe . . . standards applicable to the emission of any air pollutant . . . which *in his judgment cause, or contribute to, air pollution which may be reasonably anticipated to endanger public health or welfare*”—to include GHGs.⁶⁸ Because this CAA statute-wide definition of “air pollutant” is “unambiguous” in including chemical species such as CO₂, and because the EPA has determined that GHGs may “reasonably be anticipated to endanger public health or welfare,” the EPA has reasonable statutory authority to regulate existing stationary sources of GHG emission under section 111(b).⁶⁹ However, the statute does have one exclusion that causes some ambiguity related to the EPA's authority.

65. See *Massachusetts*, 549 U.S. at 497 (requiring EPA to determine whether GHGs endanger human health and public safety, and, if so, to regulate them under CAA Section 202).

66. See *infra* notes 70-87 and accompanying text for a full discussion of the House and Senate versions of the 1990 CAA Section 111 amendments.

67. See 42 U.S.C. § 4711(b)(1)(A) (providing statutory authority for EPA to regulate dangerous air pollution).

68. See *Massachusetts*, 549 U.S. at 528 (citing 42 U.S.C. § 7521(a)(1) (emphasis added)). “On the merits, the first question is whether § 202(a)(1) of the Clean Air Act authorizes EPA to regulate greenhouse gas emissions from new motor vehicles in the event that it forms a “judgment” that such emissions contribute to climate change. *Id.* We have little trouble concluding that it does.” *Id.* This holding was essentially reaffirmed in *Util. Air Regulatory Group*, where the Court let stand a D.C. Circuit Judgment upholding EPA GHG regulations under section 202. *Util. Air Regulatory Group*, 134 S. Ct. at 2427.

69. See *Massachusetts*, 549 U.S. at 529 (including CO₂ and GHGs in its discussion of CAA's “sweeping” definition of “air pollutant”). See also *Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the CAA*, EPA, EPA, available at www.epa.gov/climatechange/endangerment/ (last visited on Oct.

46 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

2. *The EPA can reasonably resolve the ambiguity resulting from the 1990 CAA amendment in favor of including GHG sources for section 111(d) programs*

In 1990, Congress amended the CAA to add permitting programs and revise existing clean air programs.⁷⁰ Congress' 1990 changes to section 111(d) reference pollutants under section 112's Hazardous Air Pollutant (HAP) permitting program.⁷¹ Congress's changes to section 111(d) vary between the House and Senate, but each version still holds the force of law.⁷² Under the Senate version, the section 111(d) process applies to "any air pollutant not included on a list published under . . . 112(b)."⁷³ In contrast, the House version requires rulemaking for "any air pollutant . . . not emitted from a source category which is regulated under Section 112."⁷⁴ Critics focus their attention on the ambiguous language of the House version with some finding that it prohibits section 111(d) regulation of any source regulated under Section 112.⁷⁵ Congress never discussed this slight discrepancy between the Senate and House versions in its committee hearings, floor debates, or in conference.⁷⁶ Finally, while the non-controlling U.S. Code includes only the House version, the controlling Statutes at Large include both versions.⁷⁷

Supporters of GHG regulation under section 111(d) argue that the Senate version should govern because it follows the House

19, 2014) (describing EPA's basis for finding that GHGs endanger public health and welfare). The Act may require EPA to regulate GHGs. *See* 42 U.S.C. § 7411(d)(1) ("The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 110.").

70. *See* Clean Air Act Amendments of 1990, 104 Stat. 2468, P.L. 101-549 (showing the statutory ambiguity).

71. *See id.* (highlighting Congress' references to 112's pollutants); *see also* Avi Zevin, *Dueling Amendments: The Applicability of Section 111(d) of the Clean Air Act to Greenhouse Gases*, INST. FOR POLICY INTEGRITY (Nov. 11, 2014), available at policy-integrity.org/publications/detail/dueling-amendments/ (discussing language of each amendment).

72. *See* Clean Air Act Amendments of 1990, 104 Stat. 2468, P.L. 101-549 ("The United States at Large shall be legal evidence of laws. . . ."); *see also* 1 U.S. Code § 112 ("The United States at Large shall be legal evidence of laws. . . .").

73. *See supra* note 72 (providing Senate's version of statutory language).

74. *See id.* (providing statutory language of House version).

75. *See* Zevin, *supra* note 71 (concluding that House version excludes entire sources of HAPs, not just the HAPs emitted, from section 111 regulation).

76. *See* George Bush, *Statement on Signing the Bill Amending the Clean Air Act*, (Nov. 15, 1990), available at <http://www.presidency.ucsb.edu/ws/?pid=19039> (noting lack of documented discussion surrounding passage of 1990 CAA amendments); *see also* Zevin, *supra* note 71, at 30-34 (noting same).

77. *See* 42 U.S.C. § 4711(d) (showing how U.S. Code annotation notes discrepancy).

version and it is in the Statutes at Large.⁷⁸ In the absence of a clearly articulated Congressional intent, to the extent the House version conflicts with the Senate version, a presumption against implied repeal applies.⁷⁹ Because CAA section 111(d) has always afforded regulation of non-HAP pollutants from HAP emitting sources, a change disallowing such regulations will require evidence beyond a minor ambiguity.⁸⁰

Opponents of section 111(d) GHG regulation emphasize that only the House version appears in the U.S. Code, and that this version excludes EGUs from regulation under section 111(d) if they are subject to regulation under section 112.⁸¹ Accordingly, opponents urge that the Senate version contained in the Statutes at Large is merely a drafting error, and should be given no legal force.⁸² The EPA currently interprets section 111(d) to apply to

78. See Konschnik, *supra* note 60 (discussing “last in point of arrangement” rule— “[T]he last provision in point of arrangement must control”).

79. See Konschnik, *supra* note 60 (discussing “last in point of arrangement” rule— “[T]he last provision in point of arrangement must control.”) (citing *Am. Fed’n of Gov’t Emp.s v. Webb*, 580 F.2d 496, 510 (D.C. Cir. 1978)). Moreover, the House version could also easily be read to comport with the Senate version. *Id.* This interpretation would avoid drastically changing the meaning of Section 111(d) without any discussion or other showing of intent to do so by Congress. See Kate Konschnik, *Working Draft: Why EPA is not only Authorized but Required to Regulate Toxic Pollutants and Greenhouse Gases from Existing Power Plants*, Harv. L. School 12 (Nov. 2014), available at environment.law.harvard.edu/wp-content/uploads/2015/08/regulating-existing-power-plants-clean-air-act-111d.pdf (discussing the presumption against implied repeal, and the fact that no discussions of repeal occurred during the bill’s passage through committees and Congress). Another proponent argument involves an analogy to section 109(a)(2), which calls for standards for incinerators using maximum available control technology (MACT). See Dan Farber, *Another Piece of the Section 111(d) Puzzle*, LEGAL PLANET (Dec. 2, 2014), legal-planet.org/2014/12/02/another-piece-of-the-section-111d-puzzle/ (considering section 111(d) similarities to section 109); see also Megan Ceronky & Tomás Carbonell, *Section 111(d) of the Clean Air Act: The Legal Foundation for Strong, Flexible & Cost-effective Carbon Pollution Standards for Existing Power Plants*, ENVIRONMENTAL DEFENSE FUND (Oct. 2013), available at www.edf.org/sites/default/files/section-111-d-of-the-clean-air-act_the-legal-foundation-for-strong-flexible-cost-effective-carbon-pollution-standards-for-existing-power-plants.pdf (providing how 111(d) enables EPA to take actions that it did in Clean Air Act).

80. See *Chevron*, 467 U.S. at 865 (“[A court] may not substitute [their] own construction of a statutory provision for a reasonable interpretation made by administrator of an agency.”)

81. See William Yeatman, *Primer: The Ongoing Controversy over Whether Clean Air Act §111(d) Authorizes EPA’s Clean Power Plan*, GLOBALWARMING.ORG (July 2, 2014), www.globalwarming.org/2014/07/02/primer-the-ongoing-controversy-over-whether-clean-air-act-111d-authorizes-epas-clean-power-plan/ (arguing that House version of 1990 CAA Section 111(d) amendment controls and that it precludes the EPA from regulating HAP sources, not just pollutants, under section 111(d)).

82. See *id.* (“Logically, the adoption of the House language rendered moot the Senate clerical language”). “However, the Conference Committee failed to remove the Senate’s conforming amendment.” *Id.*

48 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

EGUs already regulated under section 112 for emission of HAPs, provided that section 111(d) regulations do not target HAPs.⁸³

In reviewing the EPA's statutory interpretations similar to the ones at issue in this instance, a court will defer to the agency interpreting ambiguous statutory language because a court "may not substitute [their] own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency."⁸⁴ The EPA has long interpreted section 111(d)'s exclusion for section 112(b) sources applies only to air pollutants (HAPs) already regulated, not the entire source.⁸⁵ The EPA emphasizes that excluding all section 112(b) EGUs from regulation under section 111(d)

would be inconsistent with (i) Congress' desire in the 1990 CAA Amendments to require the EPA to regulate more substances, and (ii) the fact that the EPA has historically regulated non-hazardous air pollutants under section 111(d), even where those air pollutants were emitted from a source category actually regulated under section 112.⁸⁶

Whether the agency or its opponents are right, the EPA likely has enough basis for a "reasonable" interpretation of ambiguous statutory language under *Chevron*.⁸⁷

83. See *Legal Memorandum for Proposed Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units*, EPA (June 6, 2014), available at www2.epa.gov/sites/production/files/2014-06/documents/20140602-legal-memorandum.pdf ("Although EGUs are a source category that is regulated under CAA section 112, GHGs are not a HAP regulated under section 112."). "Therefore, the Section 112 exclusion in section 111(d) does not apply to GHGs, and 111(d) does not preclude the EPA from establishing guidelines covering GHGs from EGUs." *Id.*

84. See *Chevron*, 467 U.S. at 844, 865 (providing that courts should defer to an agency's interpretation of ambiguous statutory language).

85. See *Revision of December 2000 Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units and the Removal of Coal-and Oil-Fired Electric Utility Steam Generating Units From the Section 112(c) List*, 70 Fed. Reg. 15994, 16029-32 (March 29, 2005) ("Where a source category is regulated under section 112, a section 111(d) standard of performance cannot be established to address any HAP listed under section 112(b) that may be emitted from that particular source category.").

86. See *Memorandum for Proposed Carbon Pollution Emission Guidelines*, *supra* note 83, at 26-27 (providing Congressional intent wants EPA to regulate ambiguous statutory terms).

87. See *Util. Air Regulatory Group*, 134 S. Ct. at 2427 (deeming "reasonable" EPA's determination that the CAA allows GHG BACT standards when the CAA language is ambiguous). In the same case, the Court rejected the "tailoring rule" GHG regulations under PSD and Title V permits. See also *Babbitt v. Sweet Home Chapter of Cm'm'tys. for a Great Or.*, 515 U.S. 687 (1995) (upholding an agency interpretation of "harm" in Endangered Species Act to include habitat modification and degradation based mostly off of colloquial definition of word "harm"); see also

3. *Guidance from UARG v. EPA Supports Allowing Section 111(d) to Regulate GHGs because Section 111(d) requires the EPA to Consider Economic Impacts and Requires No Individual EGU Action*

Although the Supreme Court has not stated the requirements that would deem section 111(d) “reasonable,” the Court has left some hints.⁸⁸ In *American Electric Power Co. v. Connecticut*, the Court contemplated GHG regulation under section 111(d) holding that EPA jurisdiction pursuant to the CAA displaced federal common law suits.⁸⁹ Moreover, the Court in *UARG v. EPA* differentiated between the EPA’s BACT GHG specifications for “anyway” sources and the impermissible PSD and Title V GHG regulations based on: (1) BACT requirements cannot demand “fundamental redesign” of facilities; (2) EPA has long interpreted BACT so as to consider “whether a proposed regulatory burden outweighs any reduction in emissions to be achieved”; and (3) regulations of GHGs through BACT requirements are “not so disastrously unworkable” so as to result in “a dramatic expansion of agency authority.”⁹⁰ As a result of this ruling, lower courts will likely defer to the EPA including GHGs under section 111(d) because it does not require individual facilities to do anything specific, and instead requires the EPA to consider costs and facility lifetime in setting BSERs.⁹¹

Section 111(d) regulations such as BACT standards, will not directly require any facilities to undergo a “fundamental redesign.”⁹² BACT standards will not require a fundamental redesign

Chevron, 467 U.S. at 837 (finding EPA creation of a “bubble” definition for regulating air pollutant emissions from individual emitters reasonable, although the CAA did not explicitly call for a bubble method); see also *Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000) (upholding statutory interpretation within FERC orders without explanation; court merely called for further explanation on costs); see also *Tex. Office of Pub. Util. Counsel v. FCC*, 183 F.3d 393, 408 (5th Cir. 1999) (deferring to agency’s interpretation of 1996 Telecommunications Act when it replaced “the patchwork of explicit and implicit subsidies with ‘specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service’”).

88. For a further discussion of these hints, see *supra* notes 11-59 and accompanying text discussing *Massachusetts, Am. Elec. Power Co.*, and *Util. Air Regulatory Group*.

89. See *Am. Elec. Power Co.*, 131 S. Ct. at 2537–38 (holding that EPA jurisdiction displaced federal common law suits).

90. *Id.* “We are not talking about extending EPA jurisdiction over millions of previously unregulated entities, but about moderately increasing the demands [on those] already subject to regulation.” *Id.*

91. See *infra* notes 92–104 and accompanying text discussing how the EPA must consider costs and facility lifetime in setting BSERs.

92. See Paul Hibbard, Andrea Okie, and Susan Tierney, *EPA’s Clean Power Plan: States’ Tools for Reducing Costs and Increasing Benefits to Consumers*, ANALYSIS

50 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

because BSERs take into account compliance costs, energy use, physical constraints, geographic factors, and other differences between generating facilities.⁹³ Adhering to these BACT standards, states are then required to design their own implementation plans.⁹⁴ Any requirements for a fundamental redesign would involve a state implementing its own “standards of performance” rather than from any direct EPA action.

Section 111(d) regulations also provide a cost-benefit analysis that determines “whether a proposed regulatory burden outweighs any reduction in emissions to be achieved.” For example, when the EPA sets BSER under 111(d) it must take into “account the cost of achieving such reduction.”⁹⁵ In making these decisions, the EPA also must consider the likelihood of achieving the reduction goals in order to properly assess the “cost of achieving such reduction.”⁹⁶ Under Section 111(d), the EPA has different regulatory options that consider cost and feasibility in implementing standards as the EPA Administrator must determine whether the standards are enforceable, economical, and technologically viable.⁹⁷ If the EPA follows the textual requirements of section 111 in promulgating its regulations, the agency will be deemed to have determined “whether a proposed regulatory burden outweighs any reduction in emissions to be achieved.”⁹⁸

GROUP 4 (2014), available at www.analysisgroup.com/uploadedfiles/content/in_sights/publishing/analysis_group_epa_clean_power_plan_report.pdf (“[States] will define the set of actions that will work together to reduce emissions from fossil power plants.”).

93. See 42 U.S.C. § 7411(a)(1) (stating that BSER must “[take] into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements. . . .”); see also 40 C.F.R. § 60.22(b)(5) (2007) (requiring consideration of cost of such reduction). The regulations also require the agency to consider the “time within which compliance with emission standards of equivalent stringency can be achieved,” different “sizes, types and classes” of facilities, “geographical location,” and “physical limitations.” *Id.*; see also *Sierra Club v. Costle*, 657 F.2d 298, 330 (D.C. Cir. 1981) *rev’d*, 463 U.S. 680 (1983), (“After EPA makes this [achievability] determination, it must exercise its discretion to choose an achievable emission level which represents the best balance of economic, environmental, and energy considerations.”).

94. See 42 U.S.C. § 7411(d)(1) (mandating states determine their own plans). This Act also enables states to consider “the remaining useful life of the existing source.” *Id.*

95. See 42 U.S.C. § 7411(a)(1) (requiring EPA to consider costs in any plan it promotes).

96. See *id.* (requiring EPA to consider feasibility of goals in considering plan’s overall cost).

97. See 42 U.S.C. § 7411(h)(1)–(2) (detailing EPA’s statutory authority and considerations it must take into account).

98. See Clean Power Plan Fact Sheet, *supra* note 7 (stating Clean Power Plan’s public health and climate benefits). These benefits are worth an estimated \$55

Lastly, the EPA is unlikely to “dramatically expand” its authority if it regulates GHGs under section 111(d).⁹⁹ By giving states the flexibility to reduce GHG emissions based on their individual energy infrastructure, the EPA’s section 111 regulations can easily be applied to target only facilities and EGUs already subject to CAA regulation for some other pollutant(s).¹⁰⁰ If the EPA wanted, it could dramatically increase its jurisdiction by setting performance standards especially high for GHGs and invoking its power to “prescribe” and “enforce” state plans when states fail to do so.¹⁰¹ The EPA, however, is unlikely to dramatically expand its power and use section 111(d) to reach sources it wanted to avoid under its PSD and Title V “tailoring rule” and because the EPA’s power to prescribe or enforce implementation plans is contingent on each state failing to do so.¹⁰² Predictions about the EPA’s decisions related to its power, however, are speculative and should not serve as a basis to preclude the EPA from using section 111(d) authority to regulate GHGs.¹⁰³ Legal and policy experts must, therefore, wait until the rulemaking and state implementation stages to determine whether there is a “dramatic” expansion of EPA authority.¹⁰⁴

Over the years, legal and policy experts have proposed a range of regulatory alternatives for targeting GHGs with section 111(d),

billion to \$93 billion per year in 2030, far outweighing the costs of implementation. *Id.*

99. See *Letter from Thomas Carbonell*, EDF DIRECTOR OF REGULATORY POLICY (2015), available at https://www.edf.org/sites/default/files/content/cleanpower-plan_strong_legal_foundation.pdf (providing EPA power to regulate pollution under its statutory authority). “This conclusion was, in fact, stated before the Supreme Court by attorneys for some of the nation’s largest power companies – who declared unequivocally at oral argument that EPA has authority to regulate carbon pollution from the power sector under section 111(d). . . .” *Id.*

100. Compare CAA Section 111(d)’s command to Title V Section 108 at issue in *Util. Air Regulatory Group*, where states were told which plants at which threshold of emissions to regulate. *Util. Air Regulatory Group*, 134 S. Ct. at 2437 (discussing “250 ton per year” and “100 ton per year” emission thresholds under 42 U.S.C. § 7401 et seq.).

101. See 42 U.S.C. § 7411(d)(2)(A)–(B) (providing EPA statutory authority).

102. See *Util. Air Regulatory Group*, 134 S. Ct. at 2437 (discussing EPA’s use of “Tailoring Rule” to avoid statute’s explicit emission threshold for sources and resulting expansion of EPA’s authority over specific facilities that it did not previously have authority over). Here, the EPA has no statutory authority over any specific facilities as states determine how to reach BSER equivalency. *Id.*

103. See *Florida State Conference of N.A.A.C.P. v. Browning*, 522 F.3d 1153, 1161 (11th Cir. 2008) (discussing how to have standing). Courts generally require a plaintiff to have a “substantially probable” injury, or an “immediate” injury. *Id.*; see also *City of Los Angeles v. Lyons*, 461 U.S. 95, 107-10 (1983) (declining to hear an allegation of injury from future enforcement).

104. See *Clean Power Plan—Technical Summary for States*, EPA (2015), available at www3.epa.gov/airquality/cpptoolbox/technical-summary-for-states.pdf (providing that EPA only sets BSER, and “states choose how they will meet it.”).

52 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

including cap-and-trade programs, direct system-wide requirements, extended emissions averaging, and facility-specific emissions-rate standards.¹⁰⁵ The experts' regulatory proposals have included these tools along with many other emission reduction strategies.¹⁰⁶ The Clean Power Plan is the EPA's first attempt to regulate GHGs using CAA section 111(d).¹⁰⁷

B. The EPA's Clean Power Plan

The EPA's Final Clean Power Plan aims to reduce GHG output from existing power plants.¹⁰⁸ Citing both the Obama Administration's stated goal of addressing climate change and the scientific communities consensus linking elevated GHG concentrations to climate change, the EPA is taking its first steps toward regulating carbon emissions from existing stationary sources pursuant to its statutory authority under section 111(d) of the CAA.¹⁰⁹ The EPA

105. See EPA Attempts "Outside the Fence" Carbon Emissions Standards, TAU TECHNICAL COMMUNICATIONS LLC (June 2, 2014), www.tautechnical.com/?p=1036 (comparing "inside the fence" to "outside the fence" approaches). "Inside the fence" plans focus only on reductions standards for individual power plants, whereas "outside the fence" approaches allow for accounting of emissions reductions through efficiency measures and reductions outside of the facility's control. *Id.*; see also Jeremy M. Tarr, Jonas Montast, and Tim Profeta, *Regulating Carbon Dioxide under Section 111(d) of the CAA: Options, Limits, and Impacts*, NICHOLAS INSTITUTE FOR ENVIRONMENTAL POLICY SOLUTIONS 7 (Jan. 2013), available at nicholasinstitute.duke.edu/climate/policydesign/regulating-carbon-dioxide-under-section-111d#. VETvmvFSo (discussing, among other things, carbon taxes and emissions trading); see also Dallas Burtraw et al., *Retail Electricity Price Savings from Compliance Flexibility in Greenhouse Gas Standards for Stationary Sources*, 42 ENERGY POL'Y 67, 68–69 (2012) (discussing several options for reducing emissions on site at coal-fired plants).

106. See *infra* notes 109-157 and accompanying text (providing specifics on the Clean Power Plan's regulations). See also Conrad Schneider, *Power Switch: An Effective, Affordable Approach to Reducing Carbon Pollution from Existing Fossil-Fueled Power Plants*, CLEAN AIR TASK FORCE 3, 10–12 (Feb. 2014), available at www.catf.us/resources/publications/files/Power_Switch.pdf (advocating for "fuel switching"—for coal burning power plants to undergo retrofitting to switch from coal to natural gas as a source for production, switching their fuel source entirely from coal to natural gas).

107. See Clean Power Plan, *supra* note 6 (providing Clean Power Plan's statutory authority).

108. See *id.* (discussing goals to reduce US carbon emissions).

109. See *Executive Office of the President: The President's Climate Action Plan*, THE WHITEHOUSE (June 2013), <http://www.whitehouse.gov/sites/default/files/image/president27climateactionplan.pdf> (addressing Obama Administration's commitment to GHG reductions, and calling for promulgation of Clean Power Plan); see also *Climate Change 2013: The Physical Science Basis*, IPCC, http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf (last visited Oct. 18, 2014) ("It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century."); see also Peter Folger, *The Carbon Cycle: Implications for Climate Change and Congress*, CRS Report RL34059 (not-

estimates that the Plan can reduce emissions from EGUs by thirty-two percent by 2030 as compared to 2005 rates.¹¹⁰

1. *The Clean Power Plan Outlined*

The Clean Power Plan sets emission guidelines for states to follow in developing their own plans to address GHG emissions from existing fossil fuel-fired EGUs.¹¹¹ Under the Plan, each state receives its own rate-based goals for power sector carbon emissions based on the state's current power portfolio and recent progress toward reducing emissions.¹¹² The Plan also affords states flexibility in choosing strategies to meet their GHG reduction objectives in the least burdensome manner—whether individually or through combined efforts with a regional or multi-state plan.¹¹³ So as states develop plans to achieve GHG reduction goals from 2022-2029, the Plan provides three “building blocks,” or optional regulatory tools, to demonstrate BSER: (1) efficiency improvements in fossil-fuel power production; (2) prioritization of lower emitting power plants to keep dirty plants offline as much as appropriate; and (3) reduction credits for “zero emitting” renewable energy sources.¹¹⁴

ing “As the CO₂ concentration grows, it increases the degree to which the atmosphere traps incoming radiation from the sun, which further warms the planet”).

110. See *Regulatory Impact Analysis for the Clean Power Plan Final Rule*, ENVIRONMENTAL PROTECTION AGENCY ES-8 (Aug. 3, 2015), available at www2.epa.gov/sites/production/files/2015-08/documents/cpp-final-rule-ria.pdf (“[U]nder the rate-based approach, CO₂ emission reductions increase to 871 million short tons (32 percent) in 2030 when compared to 2005 levels.”).

111. See *supra* notes 60-108 and accompanying text for a further discussion of the EPA's identified “best system of emission reductions.”

112. See Clean Power Plan, *supra* note 6, at 10 (demonstrating that under Clean Power Plan, states can opt to set their goals in terms of mass). Under the same plan, states can also wait for the EPA to publish mass-based goals, instead of expressing output as a ratio of GHG tons to kWhr produced by default. *Id.*

113. See Clean Power Plan, *supra* note 6, at 24 (“Each state can do so on its own, or a state can collaborate with other states and/or tribal governments on multi-state plans, or states can include in their plans the trading tools that EGUs can use to realize additional opportunities for cost savings while continuing to operate across the interstate system through which electricity is produced.”).

114. See *id.* at 27, 230 (“In this final action, the agency has determined that the BSER comprises the first three of the four proposed “building blocks,” with certain refinements to the three building blocks.”). *Id.* “Building block one includes operational improvements and equipment upgrades that the coal fired steam-generating EGUs in the state may undertake to improve their heat rate.” *Id.* It qualifies as part of the BSER because it improves the carbon intensity of the affected EGUs in generating electricity through actions the affected sources may undertake that are adequately demonstrated and whose cost is “reasonable.” See Clean Power Plan, *supra* note 6, at 238 (discussing BSER requirements). For a state to show compliance through building block two,

the owner/operator of a steam EGU may increase generation at an existing NGCC unit it already owns, or one that it purchases or invests in.

2. *Supply-side efficiency improvement for coal-fired EGUs*

The EPA expects that major CO₂ emissions reductions can result from inexpensive efficiency gains at the dirtiest power plants through heat-rate improvements in coal-fired power plants.¹¹⁵ The EPA estimates that states can realize efficiency gains of 2.1 to 6.9 percent simply by adopting best practices for coal-fired EGUs.¹¹⁶ The EPA and proponents of these supply-side efficiencies emphasize that heat rate improvements pay for themselves.¹¹⁷ The agency believes heat rate improvements pay for themselves because their costs are at least partially counteracted because they reduce fuel costs per unit of power.¹¹⁸ The agency believes strongly in these supply-side efficiencies, but opponents are concerned that certain

In addition, the owner/operator may, through a bilateral transaction with an existing NGCC unit, pay the unit to increase generation, and acquire the CO₂-reducing effects of that increased generation in the form of a credit. Building block three is a 'system of emission reduction' for all affected EGUs because incremental [renewable energy] generation will result in reduced generation and emissions from affected EGUs, and owners or operators of affected EGUs can apply or implement building block three through a number of actions.

Id. "For example, they can invest in incremental [renewable energy] generation either directly or through the purchase of [renewable energy credits]." *Id.* at 437. The proposed 2014 plan included a fourth building block that called for use of demand-side energy efficiency measures, but this fourth building block was eliminated due to difficulties with quantifying the benefits realized from such efficiency measures. See EPA Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34829, at 34835 (2014) [hereinafter Proposed Clean Power Plan].

115. See Clean Power Plan, *supra* note 6, at 238; *Key Changes and Improvements*, *supra* note 6, at 3 (indicating EPA expects that states can implement heat rate improvements to reduce GHG emissions by 2.1 percent to 4.3 percent at existing coal-fired power plants).

116. See Clean Power Plan, *supra* note 6, at 660–61 (emphasizing states potential efficiency gains). In this same section of the Clean Power Plan, see table 6 for a breakdown of heat rate improvements by region over a two-year averaging period. *Id.* The Proposed Clean Power Plan assumed an overall average of six percent efficiency improvements for coal and oil fired plants, but the EPA changed its calculation after the comment period. See *Key Changes and Improvements*, *supra* note 6, at 3 (noting the change in expectations for heat rate efficiency improvements for coal fired power plants).

117. See Kambaladinne, Rajesh, *Heat Rate Reduction in Thermal Power Generation Plants Leveraging 'Big Data/Analytics' Solutions*, ENERGY CENTRAL (Aug. 5, 2015), www.energycentral.com/generationstorage/futureandalternativegeneration/articles/3220/Heat-rate-reduction-in-thermal-power-generation-plants-leveraging-Big-Data-Analytics-solutions (discussing how improving a power plant's heat rate can "significantly lower fuel consumption").

118. See *Analysis of Heat Rate Improvement Potential at Coal-Fired Power Plants*, U.S. ENERGY INFORMATION ADMINISTRATION (May 19, 2015), www.eia.gov/analysis/studies/powerplants/heatrate/ (assessing lowered fuel costs, cost of compliance, and other costs associated with heat rate improvements).

states will rely on them too much to the point that they will require expensive equipment upgrades.¹¹⁹

3. *Environmental Dispatch—prioritizing power generation from clean sources*

The EPA's second "building block" encourages states to use lower-emitting power plants to meet energy demand.¹²⁰ This EPA recommendation is very expensive because most power plants currently dispatch based on their price, and fossil fuel based power is cheapest.¹²¹ The Clean Power Plan, conversely, proposes that states prioritize the use of more expensive and higher efficiency natural gas combined cycle (NGCC) units over dirtier coal-fired or oil-fired power plants.¹²² The EPA established this BSER assuming that, on average, states can dispatch existing and under-construction NGCC EGUs at seventy-five percent "net summer capacity," and estimates that this will result in lower carbon and co-pollutant emissions nationally.¹²³ The EPA's primary opponents argue these recommendations could compromise state grid reliability and additionally, some states' anticipated power mixes have no room for additional natural gas.¹²⁴

119. See Wesley Brown, *Gov.-elect Hutchinson pushes back against EPA's Clean Power Plan*, THE CITY WIRE (Dec. 3, 2014), www.thecitywire.com/node/35691#.VhXvQ3pVikp (offering example of a state lawmaker pushing back against the Clean Power Plan). "For example, Duane Highley, President and CEO of Arkansas Electric Cooperatives Corp., stated publicly that the EPA's proposal should be delayed because it could shut down the state's coal-powered power plants, which supply more than 53% of the state's electricity demand." *Id.*; see also *infra* notes 135-157 and accompanying text for a further discussion of points of conflict surrounding the Clean Power Plan.

120. See Clean Power Plan, *supra* note 6, at 315 (providing second building block of Clean Power Plan).

121. See FERC Staff, *Economic Dispatch: Concepts, Practices and Issues*, FEDERAL ENERGY REGULATORY COMMISSION (Nov. 13, 2005), available at <http://www.ferc.gov/eventcalendar/Files/20051110172953-FERC%20Staff%20Presentation.pdf> (noting that, generally, electricity is procured from where it is most cheaply available).

122. See Clean Power Plan, *supra* note 6, at 315 (proposing states prioritize use of higher efficiency, natural gas production).

123. See *id.* at 704, 711 (providing basis of determining BSER). The "net summer capacity" is determined by the maximum actual performance of a power plant at its respective point of interconnection on the electric grid during the summer months. See *What is the Difference Between Electricity Generation Capacity and Electricity Generation*, U.S. ENERGY INFORMATION ADMINISTRATION (Mar. 30, 2015), www.eia.gov/tools/faqs/faq.cfm?id=101&t=3 (explaining difference between electric generation capacity and electric generation).

124. See Jean Chemnick and Emily Holden, *Clean Power Plan Ratchets up Burdens on Coal States*, ENERGY WIRE (Aug. 12, 2015), www.eenews.net/stories/1060023333 (noting discrepancy between state BSER goals, and difficulty that coal states will face in complying).

4. Expansion of zero and low-emitting EGU capacity

The Clean Power Plan's third "building block," encourages states to expand generating capacity to renewable and low-emitting sources such as solar, geothermal, and wind.¹²⁵ The Plan emphasizes that states using more generation from these low or non-emitting sources will reduce the required output from higher emitting sources, and will reduce the electric system's overall emissions.¹²⁶ Even without this Clean Power Plan initiative, the nation's commitment to renewable sources is promising because "[m]any affected EGUs are already planning on deploying significant amounts of [renewable energy]."¹²⁷ The Final Clean Power Plan reflects this commitment by including more use of renewable energy than the proposed plan reasoning that "recent reductions in the cost of clean energy technology, as well as projections of continuing cost reductions," justify the commitment to renewables.¹²⁸ Under the Proposed Clean Power Plan, the EPA estimated that renewable energy would constitute twenty-two percent of total nationwide energy production by 2030.¹²⁹ Under the Final Clean Power Plan, the EPA estimates that renewable energy will constitute twenty-eight percent of total nationwide energy production by 2030.¹³⁰

Remember, however, that the Clean Power Plan's building blocks are not mandatory so state plans might include any, all, or none of the building blocks and states might also implement strategies and technologies not discussed in the Clean Power Plan.¹³¹ In

125. See Clean Power Plan, *supra* note 6, at 436 (highlighting Clean Power Plan's emphasis on renewables). The 2014 Proposed Clean Power Plan included nuclear generation as part of building block 3, but the final plan does not. See Clean Power Plan, *supra* note 6, 385–86. States can still use nuclear power generation to show reductions in GHGs per MWh produced, but the EPA did not include nuclear generation in their determination of BSER. *Id.*

126. See *id.* at 437 (incremental RE generation will result in reduced generation and emissions from affected EGUs).

127. See Clean Power Plan, *supra* note 6, at 744 (discussing many utilities current commitment to renewables).

128. See *Key Changes and Improvements*, *supra* note 6, at 3 (providing why the commitment to renewable energy is feasible).

129. See Scott Detrow and Elizabeth Hardball, *Final Clean Power Plan Shifts Toward Renewables and Away from Natural Gas*, E&E Publishing (Aug. 4, 2015), www.eenews.net/stories/1060022944 (noting that the final rule's renewable deployment estimates are "higher than the draft rule's 22 percent estimate").

130. See *id.* (detailing how "renewable energy will make up 28 percent of total generating capacity" in Final Clean Power Plan).

131. See Clean Power Plan, *supra* note 6, at 283 (providing different measures EGUs could take).

The BSER also encompasses a variety of measures or actions that individual affected EGUs could take to implement the building blocks, including (i) direct investment in efficiency improvements and in lower- and

addition to the three building blocks, the Clean Power Plan discusses market-based trading programs, co-firing—or switching to—natural gas at coal plants, transmission efficiency improvements, plant retirements, expanding nuclear power, and any other methods a state can use to meet BSER.¹³² While the EPA set its reduction goals with these three building blocks as its baseline, the Clean Power Plan is not absolutely mandatory and it only requires states to “adequately demonstrate” BSER in their reduction plans.¹³³

IV. POINTS OF CONTENTION

Challengers of the EPA's proposed regulations will object to the EPA's statutory authority to promulgate the Clean Power Plan and the EPA's individual determinations regarding the Plan's feasibility and ultimate effect.¹³⁴ Challengers will likely bring lawsuits under each theory, but successful opponents will wait for state implementation to challenge any individual determinations.¹³⁵

A. Qualms with agency interpretation of authority under section 111(d)

Many opponents to the EPA's Clean Power Plan already criticize the agency's broad interpretation of its section 111(d) authority.¹³⁶ However, as discussed in Section III of this Article,

zero-carbon generation, (ii) cross-investment in these activities through mechanisms such as emissions trading approaches, where the state-established standards of performance to which sources are subject incorporate such approaches, and (iii) reduction of higher carbon generation.

Id.

132. See *supra* notes 106–107 and accompanying text for examples of other possible tools states could implement to demonstrate equivalence with BSER.

133. See Clean Power Plan, *supra* note 6, at 9 (discussing how nothing in the plan is absolutely mandatory).

134. See Tim Profeta, *Challenges Ahead for Clean Power Plan, Another EPA Rule*, NAT. GEO. (Aug. 15, 2015), voices.nationalgeographic.com/2015/08/13/challenges-ahead-for-clean-power-plan-another-epa-rule/ (discussing early challenges to EPA's interpretation of CAA section 111(d)); see also *How to Kill the Coal Industry: Implement EPA's "Clean Power Plan,"* IER (May 26, 2015), instituteeforenergyresearch.org/analysis/how-to-kill-the-coal-industry-implement-epas-clean-power-plan/ (taking issue with EPA's determination of climate change benefits, burdens to consumers, and burdens to coal industry).

135. See *supra* notes 130–157 and accompanying text for a discussion about many points of contention with the Clean Power Plan.

136. See Marlo Lewis, *How Unlawful is EPA's Clean Power Plan*, GLOBALWARMING.ORG (Oct. 6, 2014), www.globalwarming.org/2014/10/06/how-unlawful-is-epas-clean-power-plan/ (claiming that Clean Power Plan is unconstitutional); see also Nicolas Loris, *The Many Problems of the EPA's Clean Power Plan and Climate Regulations: A Primer*, THE HERITAGE FOUND. (July 7, 2015), www.heritage.org/research/reports/2015/07/the-many-problems-of-the-epas-clean-power-plan-and-climate-regulations-a-primer (discussing different and problematic implication of the Clean

58 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

opponents arguments against the EPA's broad interpretation of "any air pollutant" to include GHGs under CAA section 111(d) will likely fail under Justice Scalia's strict adherence to canons of statutory construction.¹³⁷ Opponents challenging the Clean Power Plan's "building block" framework claim that the EPA will inappropriately set "standards of performance," which is a duty the CAA explicitly delegates to the states.¹³⁸ The EPA, conversely, contends that state specific goals are merely a benchmark of BSER, and the EPA Administrator retains the authority to determine whether the standards are "adequately demonstrated" under the Clean Power Plan.¹³⁹ Consistent with the principles of agency deference under *Chevron*, most courts will defer to the EPA's interpretation of its CAA section 111(d) authority.¹⁴⁰ Under *Chevron*, the EPA only needs to show that using the CAA to regulate existing GHG sources was "reasonable."¹⁴¹

Power Plan). See also Mario Loyola, *Federal Coercion and the EPA's Clean Power Plan: An Obscure Provision of the Clean Air Act has Become the Basis for a Sweeping Effort to Fight Climate Change. But is it Constitutional?*, THE ATLANTIC (May 17, 2015), www.theatlantic.com/politics/archive/2015/05/federal-coercion-and-the-epas-clean-power-plan/393389/ (arguing that Clean Air Act constitutes an unconstitutional Congressional delegation of authority to EPA).

137. See *supra* notes 60-88 and accompanying text for a discussion of Justice Scalia's interpretation.

138. See Seth Jaffe, *What a Shock?! Nebraska's Early Challenge to EPA's Clean Power Plan is Dismissed*, FOLEY HOAG LLP (Oct. 8, 2014), www.lawandenvironment.com/2014/10/08/what-a-shock-nebraskas-early-challenge-to-epas-clean-power-plan-is-dismissed/ (arguing that EPA's goals are arbitrarily based and amount to a takeover of discretion properly left to states). However, the EPA considered the statutory BSER requirements: the cost of achieving, "any non air quality health and environmental impact and energy requirements," and expected lifetime of sources subject to regulation. 42 U.S.C. §§ 7411(a), (d). The EPA guidelines in the Clean Power Plan, reflecting the state-federal government relationship set out in section 111(d), adhere to the concerns laid out by the Supreme Court in *Util. Air Regulatory Group*. See *supra* notes 88-107 and accompanying text for a discussion of these factors applied to section 111(d) generally.

139. See Clean Power Plan, *supra* note 6, at 820 (detailing that State-specific goals are an "expression of the BSER that state may choose to use to establish emission standards for its affected EGUs" to demonstrate compliance).

140. See *Chevron*, 467 U.S. at 844 (providing that court must uphold a reasonable interpretation of an ambiguity by an administering agency).

141. See *A State Planning Guide for Clean Air Act Section 111(d)*, CNTR. FOR THE NEW ENERGY ECONOMY 21 (June, 2014), available at cnee.colostate.edu/graphics/uploads/CNEE_CAA-Section-111d-State-Planning-Guide-6_2014.pdf ("[A]ll state air quality planning agencies are very familiar with the development of State Implementation Plans (SIPs) used to maintain NAAQS standards and regulations for criteria pollutants under § 111(b), which have many similarities to the state plans required under § 111(d).").

B. Worries Over Burdens to Come

Most Clean Power Plan opponents raise concerns about the Plan's ultimate effects on states, EGUs, and the environment.¹⁴² These opponents believe that the Plan's incentives for renewable and low-emitting fuels will cause reliability issues, building blocks two and three will amount to "fuel switching" and "fundamental redesigns," and the plan will serve to "kill coal" and unnecessarily burden EGUs.¹⁴³ On the other side of the debate, environmental and public health advocates argue that the Clean Power Plan's building blocks are not aggressive enough to reduce the dangerous effects of climate change.¹⁴⁴

The EPA has considered both sides of the debate in promulgating its Final Clean Power Plan and bases its conclusions on a thorough energy industry analysis, a detailed review of regional power portfolios, a careful consideration of the nation's overall energy costs, and thoughtful policy reports from a variety of outside authorities.¹⁴⁵ Under the Final Clean Power Plan, the EPA predicts

142. See William Yeatman, *EPA's Clean Power Plan Overreach*, COMPETITIVE ENTERPRISE INSTITUTE (July 28, 2015), <https://cei.org/content/epa's-clean-power-plan-overreach> (arguing that Clean Power Plan intrudes on regulatory decisions best left to states, and highlighting difficulties states might have in complying); see also *How to Kill the Coal Industry: Implement EPA's "Clean Power Plan,"* IER (May 26, 2015), instituteeforenergyresearch.org/analysis/how-to-kill-the-coal-industry-implement-epas-clean-power-plan/ (addressing effects on coal industry); see also Alan Philips, *Obama's Clean Power Plan does not go far Enough*, THE NATIONAL (Aug. 6, 2015), www.thenational.ae/opinion/obamas-clean-power-plan-does-not-go-far-enough (discussing immediate need to mitigate climate change as much as possible, and arguing that Clean Power Plan does not do as much as possible).

143. See Salva Andiappan, *Potential Reliability Impacts of EPA's Proposed Clean Power Plan*, MIDWEST RELIABILITY ORG (2014), <https://midwestreliability.org/MRO/Documents/Potential%20Reliability%20Impacts%20of%20EPA's%20Proposed%20Clean%20Power%20Plan.pdf> (discussing reliability issues that Clean Power Plan might produce); see also Brad Kenagy, *Investment Implications of the President's Clean Power Plan*, SEEKING ALPHA (Aug. 10, 2015), seekingalpha.com/article/3424196-investment-implications-of-the-presidents-clean-power-plan (assessing market impact on fossil fuel markets); see also *How to Kill the Coal Industry: Implement EPA's "Clean Power Plan,"* IER (May 26, 2015), instituteeforenergyresearch.org/analysis/how-to-kill-the-coal-industry-implement-epas-clean-power-plan/ (taking issue with EPA's determination of climate change benefits, burdens to consumers, and burdens to coal industry).

144. See *EPA's Clean Power Plan May Not Go Far Enough*, SCIENCE 2.0 (Nov. 14, 2014), available at www.science20.com/news_articles/epas_clean_power_plan_may_not_go_far_enough-149143 (postulating that EPA "picked a number out of thin air" when setting BSER standards); see also Michael Grunwald, *5 Reasons Obama's Transformative Power Plan Won't Transform Anything*, POLITICO (Aug. 2015), www.politico.com/agenda/story/2015/05/obama-transformative-energy-power-plan-000016 (arguing that rule is "pretty weak," and that Obama administration crafted rule to "survive legal challenges").

145. See REGULATORY IMPACT ANALYSIS FOR THE CLEAN POWER PLAN FINAL RULE, EPA at 8-1-8-4 (Oct. 15, 2015), <http://www.epa.gov/sites/production/files/>

60 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

that states will design their performance standards in ways that have minimal reliability issues, no complete redesigns of plants, and modest, if any, increases in overall energy cost.¹⁴⁶ These relevant EPA factual determinations are entitled to even more judicial deference than their statutory interpretations above, because, under the Administrative Procedure Act, agency conclusions of fact are reviewed under a deferential, arbitrary and capricious standard.¹⁴⁷ Finally, under the newly released Clean Power Plan, immediate challengers present courts with ripeness issues because courts will not want to adjudicate claims until their outcomes are determinable.

In determining whether agency action is ripe for review, courts make two determinations: (1) whether the issues tendered are appropriate for judicial resolution; and (2) the hardship of the parties if judicial relief is denied at the present stage.¹⁴⁸ In *Toilet Goods Association v. Gardner*, the Supreme Court held that a regulation with permissive implementation criteria was not appropriate for review because the practical effects were still speculative.¹⁴⁹ The Court also considered uncertainty regarding the type, probability, and magnitude of effects important in assessing the likely harm of postponing judicial review, because the plaintiffs did not yet know whether the regulation would require them to change their “primary conduct.”¹⁵⁰

Just as opponents did not have a ripe claim to challenge the Clean Power Plan’s interpretive basis before it became a final regu-

2015-08/documents/cpp-final-rule-ria.pdf (comparing a wide range of benefits and costs analyzed by multiple outside authorities); see also *Study: Clean Power Plan Could Save Thousands of Lives*, U.S. NEWS & WORLD REPORT (May 4, 2015), www.usnews.com/news/articles/2015/05/04/epa-clean-power-plan-could-save-3-500-lives-a-year-study-says (stating Clean Power Plan drew over 4.3 million comments from interested stakeholders and public).

146. See *Clean Power Plan*, *supra* note 6, at 17, 21, 41, 48 (noting that plans in the process of redesign will count toward meeting reduction goals). The EPA even requires states to consider any incidental affect on low-income ratepayers in preparing their SIPs. *Id.* at 79.

147. See Administrative Procedure Act § 701 (showing an agency’s factual conclusions are subject to an “arbitrary and capricious” standard). See also *City of Kansas City v. Dep’t of House & Urban Dev.*, 923 F.2d 188, 189 (D.C. Cir. 1991) (providing that after an agency establishes statutory authority to act, it must act using “reasoned decision-making” with respect to factual findings and conclusions).

148. See *Toilet Goods Ass’n v. Gardner*, 387 U.S. 158, 162 (1967) (determining whether issues were ripe for judicial resolution).

149. See *id.* (illustrating how practical effects could not be determined). Compare *Abbott Labs v. Gardner*, 387 U.S. 136 (1967) (initiating pre-enforcement judicial review because the regulation at the time did not set out a general standard).

150. See *Toilet Goods Ass’n*, 387 U.S. at 162 (discussing primary conduct).

lation, opponents currently face ripeness issues when trying to litigate the ultimate results of the plan.¹⁵¹ Like the regulations in *Toilet Goods Association v. Gardner*, since none of the Clean Power Plan's proposed tools are mandatory, courts can only guess what types of implementation plans the states will develop.¹⁵² As a result, a litigant alleging any actual harm to EGUs and utilities is speculative because these same EGUs and utilities do not currently know how they will have to change their "primary conduct."¹⁵³ For example, states might opt to emphasize one building block over another, or forego using the Plan's building blocks altogether.¹⁵⁴ Similarly, the Clean Power Plan's effect on reducing GHGs has not yet been determined.¹⁵⁵ The most substantive challenges to the Clean Power Plan are, therefore, not currently ripe for review. Until states implement their own section 111(d) BSER standards, courts do not have sufficient facts to conduct an adequate review.

While no determinations have been made, the EPA most likely correctly used its authority in promulgating the Final Clean Power Plan. The EPA's interpretations of its CAA authority will likely stand because the EPA enjoys considerable deference in its interpretation under *Chevron*.¹⁵⁶ The EPA's policy considerations will also likely stand because policy conclusions are only subject to arbitrary and capricious review, and because policy effects analysis will focus on individual state's implementation plans. Finally, the EPA's Clean Power Plan could *possibly* be struck down by a court if challengers can show definitive hardships across the nation, courts most likely will be reluctant to completely strike down the EPA's author-

151. See Emily Atkin, *Judge: Lawsuit to Kill EPA Climate Rule 'Runs Contrary to Basic Law*, THINK PROGRESS (Oct. 8, 2014), thinkprogress.org/climate/2014/10/08/3577581/nebraska-epa-climate-lawsuit-dismissed/ (stating court dismissed first suit against EPA's proposed Clean Power Plan because it was not ripe for review).

152. See Brad Plumer, *How Obama's Clean Power Plan Actually Works*, VOX (Aug. 5, 2015), www.vox.com/2015/8/4/9096903/clean-power-plan-explained ("[W]e still don't really know the ultimate impact of this rule."). "So much [of the rule] depends on what states do, how utilities respond, whether courts uphold this rule, and how the next president treats the rule." *Id.*

153. See *AT&T Corp. v. Iowa Util.s Bd.*, 525 U.S. 366, 386 (1999) (stating that when there is no immediate effect on plaintiff's primary conduct, federal courts normally do not entertain pre-enforcement challenges to agency rules and policy statements).

154. See *supra* notes 95-97 (offering a few different examples).

155. See Plumer, *supra* note 153 (providing that Clean Power Plan's effect on reducing GHGs has yet to be determined).

156. See *supra* notes 60-107 (explaining how EPA reasonably interpreted its statutory authority).

62 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVII: p. 35

ity solely because some states improperly implement their BSER plans.¹⁵⁷

V. CONCLUSION

Guided by prevailing interpretations and insight from the Supreme Court, the EPA most likely made a reasonable interpretation of its statutory authority under CAA 111(d) to regulate GHGs.¹⁵⁸ Litigants that challenge the Clean Power Plan based on the EPA's interpretation of section 111(d) will most likely lose because courts defer to agency's reasonable interpretations of ambiguous statutory authority under *Chevron*.¹⁵⁹ Litigants bringing factual challenges about the EPA's policy determinations will most likely fail because they face an even steeper burden having to prove the EPA acted in an "arbitrary and capricious" manner.¹⁶⁰ Additionally, until states implement their own Clean Power Plan guided performance standards, no litigants will be able to challenge the standards, because they will not be able to demonstrate they cause extreme burdens on utilities or insufficiently aspire toward reduction goals.¹⁶¹ Ultimately, none of the potential challenges will likely affect the Clean Power Plan's framework.

157. See *Chevron*, 467 U.S. at 865 (considering factual determinations based only on information available to agency at time of action).

158. See *supra* notes 60-107 (explaining how EPA reasonably interpreted its statutory authority).

159. See *supra* notes 140-141 (discussing *Chevron* standard).

160. See Administrative Procedure Act § 701; see also *City of Kansas City*, 923 F.2d at 189 (discussing more deferential "arbitrary and capricious" standard from APA § 701 for reviewing factual determinations made by an agency).

161. See *Toilet Goods Ass'n*, 387 U.S. at 162 (refusing to hear a case involving speculative harm). These challenges will fail until they can show a definitive harm, a substantial likelihood of such harm, or a required change in their "primary conduct." *Id.*