

NOTES

A Contingency of First Resort: Policy Lessons for Greenhouse Gas Regulation Through Backstop Contingency Measures Under Section 111 of the Clean Air Act

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ABSTRACT

In December of 2010, the Environmental Protection Agency (“EPA”) announced that it would regulate greenhouse gas (“GHG”) emissions from stationary sources under Section 111 of the Clean Air Act (“CAA”). Existing power plants will be regulated under CAA Section 111(d). State policymakers, utilities, and environmental groups suggest that the rules governing existing sources should allow states to use existing GHG mitigation programs to comply with Section 111(d), even if they are not enforceable per se. These unenforceable programs could be utilized if they are coupled with contingency or backstop mechanisms, which are second-order, enforceable provisions that are automatically triggered when a preexisting program fails to achieve a projected level of emission reduction.

This note examines the promulgation of the Western Regional Air Partnership’s (“WRAP”) SO₂ Backstop Cap-and-Trade Program as a model contingency program. This program illustrates states’ interest in, and the EPA’s receptivity to, contingency measures in the context of regional haze. After considering the willingness of eligible states to opt into the program and the implementation plan approval process for these states, this note concludes with policy lessons taken from the SO₂ backstop in an effort to establish best practices for potential future contingency measures for GHG regulation under CAA Section 111(d). Ultimately, the EPA’s imposition of earlier deadlines and more stringent requirements on participating states, as well as the EPA’s frequent rule revisions in light of ongoing litigation, hampered states’ willingness to use WRAP’s backstop pro-

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gram. Future contingencies should treat states that opt in or out as evenhandedly as possible so that states are not deterred from using existing programs, which may be their preferred first-order approach and the most effective or efficient at achieving emission reductions.

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INTRODUCTION

In December of 2010, the Environmental Protection Agency (“EPA”) announced that it would regulate greenhouse gas (“GHG”) emissions from stationary sources, including fossil fuel-fired power plants and refineries, under Section 111 of the Clean Air Act (“CAA”).¹ This commitment followed litigation clarifying the agency’s regulatory authority in *Massachusetts v. EPA*, 549 U.S. 497 (2007), where the Supreme Court held that GHGs qualify under the CAA’s broad definition of “air pollutant” and that the EPA must regulate GHGs if the agency reasonably anticipates them to endanger public health or welfare. Pursuant to this decision, the EPA finalized an endangerment finding on December 7, 2009 and indicated that six specific GHGs threaten the public health and welfare of current and future generations.²

Because GHGs from existing sources are neither regulated as criteria pollutants under National Ambient Air Quality Standards (“NAAQS”) nor as hazardous air pollutants (“HAPs”), the agency proposed regulations under Section 111(d).³ Section 111(d)(1)(A)(ii) legally obligates the EPA to regulate GHG

1. *EPA Greenhouse Gas Regulation FAQ*, Ctr. for Climate & Energy Solutions, <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq> (last visited Dec. 20, 2014).

2. *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/climatechange/endangerment/> (last updated Nov. 22, 2013).

3. 42 U.S.C.A. § 7411(d)(1)(A)(i) (West 2014); *see also* Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,830-32 (proposed June 18, 2014) (to be codified at 40 C.F.R. pt. 60), *available at* <http://www.gpo.gov/fdsys/pkg/FR-2014-06-18/pdf/2014-13726.pdf>. Notably, two pending lawsuits challenge the EPA’s proposed rule. *In re Murray Energy Corp.*, No. 14-1112 (D.C. Cir. filed June 26, 2014); *West Virginia v. EPA*, No. 14-1146 (D.C. Cir. filed Aug. 1, 2014). The lawsuits

emissions from existing power plants once the agency finalizes GHG regulations for new power plants. The EPA proposed carbon pollution standards for new power plants on September 20, 2013.⁴

Section 111(d) confers authority upon the agency to prescribe a procedure that is “similar to” that of Section 110 of the CAA, which regulates NAAQS. Section 110 requires states to obtain EPA approval for their implementation plans, which set forth measures, means, or techniques for controlling emissions.⁵ States have significant discretion in setting standards, with the caveat that the EPA must approve state plans and must set minimum standards for states through emission guidelines.⁶ Because a majority of new, modified, and reconstructed facilities regulated under the new source performance standards in Section 111(b)(1)(B)⁷ are also covered by NAAQS and HAPs provisions, there is little precedent for the EPA’s promulgation of rules or guidance under Section 111(d), which limits states’ access to guidance for crafting viable policies.⁸

The CAA thus accords states a dominant role in implementing the EPA’s regulations under Section 111(d).⁹ Section 110 (Section 111(d)’s statutory analog) provides that state plans can incorporate, for example, fees, permits, and emission rights that the states deem necessary or appropriate to achieve compliance.¹⁰ One limitation on this flexibility is that standards on any source must be enforceable.¹¹ State policymakers, utilities, and environmental groups suggest that the rules governing existing sources should allow states to use existing GHG mitigation programs to comply with Section 111(d).¹² These programs, which include renewable portfolio standards, emissions budget trading programs, and end-use energy efficiency resource standards, reduce emissions; however, they

argue that Section 111(d) bars the EPA from regulating power plants because the agency has already issued standards for power plants under the CAA’s HAPs provision. These suits are unlikely to succeed because of the D.C. Circuit’s unwillingness to rule on agency rules that have not yet been finalized, according to Carolyn Whetzel & Laura Mahoney, *Challenges to EPA Power Plant Proposal Highlight Issues Central to Future Litigation*, DAILY ENV’T REPORT, Aug. 13, 2014, at A-12.

4. *Regulatory Initiatives*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html> (last updated Sept. 24, 2013).

5. 42 U.S.C.A. § 7411(d)(1) (West 2014); 42 U.S.C.A. § 7410(a)(1) (West 2014).

6. See CTR. FOR CLIMATE AND ENERGY SOLUTIONS, *supra* note 1.

7. 42 U.S.C.A. § 7411(b)(1)(B) (West 2014); *New Source Performance Standards and State Implementation Plans*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/compliance/monitoring/programs/caa/newsources.html> (last updated June 13, 2012).

8. Jonas Monast et al., *Regulating Greenhouse Gas Emissions from Existing Sources: Section 111(d) and State Equivalency*, 42 ENVTL. L. REP. 10,206, 10,206 (2012), available at <https://nicholasinstitute.duke.edu/sites/default/files/publications/regulating-greenhouse-gas-emissions-from-existing-sources-paper.pdf>.

9. JON BRUNING ET AL., PERSPECTIVE OF 18 STATES ON GREENHOUSE GAS EMISSION PERFORMANCE STANDARDS FOR EXISTING SOURCES UNDER §111(D) OF THE CLEAN AIR ACT 3, 5, 6 (2013), available at <http://www.americaspower.org/sites/default/files/AG%20White%20Paper.pdf>.

10. 42 U.S.C.A. § 7410(a)(2)(A) (West 2014).

11. *Id.*

12. Monast et al., *supra* note 8, at 10,206.

do not always place enforceable obligations on emitters.¹³ One potential way to use these programs is to couple them with contingency or backstop mechanisms. These include second-order, enforceable provisions that are automatically triggered when the existing programs fail to achieve a projected level of emission reduction—an approach currently employed under other provisions of the CAA.¹⁴

This note begins by examining the promulgation of the Western Regional Air Partnership's ("WRAP") SO₂ Backstop Cap-and-Trade Program, a model contingency program. This program illustrates states' interest in, and the EPA's receptivity to, contingency measures for regional haze. Regional haze is visibility impairment caused by the cumulative air pollutant emissions from numerous sources over a wide geographic area.¹⁵ Next, this note assesses the willingness of eligible states to opt into the contingency program in light of litigation challenging the EPA's authority to approve the program. The note then describes the implementation plan approval process for participating states. Finally, using policy lessons from the SO₂ backstop, the note proposes best practices for using future contingency measures for GHG regulation under CAA Section 111(d). The EPA's imposition of earlier deadlines and more stringent requirements on participants, as well as the EPA's frequent rule revisions in light of ongoing litigation, has hampered states' willingness to use WRAP's backstop. Regulators should strive to treat states opting in or out of contingency programs as evenhandedly as possible so that states are not deterred from opting into existing programs that would otherwise be their preferred first-order approaches or the most effective or efficient means of reducing emissions.

I. WRAP AS A MODEL CONTINGENCY PROGRAM: BACKGROUND

This section examines the statutory and regulatory context, development, structure, and operation of WRAP's SO₂ Backstop Cap-and-Trade Program. The EPA's acceptance of WRAP's state-driven recommendations for this program established a model contingency measure, which consists of a first-order voluntary program for regulatory compliance and a second-order backstop for enforcement if the voluntary program fails.¹⁶

WRAP's backstop is not the first example suggesting the EPA is amenable to contingency measures. The EPA sanctioned a contingency program by regulation

13. U.S. ENVTL. PROT. AGENCY, CONSIDERATIONS IN THE DESIGN OF A PROGRAM TO REDUCE CARBON POLLUTION FROM EXISTING POWER PLANTS 2 (Sept. 23, 2013), *available at* <http://www2.epa.gov/sites/production/files/2013-09/documents/20130923statequestions.pdf>.

14. 42 U.S.C.A. § 7502(c)(9) (West 2014).

15. 40 C.F.R. § 51 (2015).

16. *See* W. REG'L AIR P'SHIP, VOLUNTARY EMISSIONS REDUCTION PROGRAM FOR MAJOR INDUSTRIAL SOURCES OF SULFUR DIOXIDE IN NINE WESTERN STATES AND A BACKSTOP MARKET TRADING PROGRAM i, 8 (2000), *available at* <http://nsdi.epa.gov/ttn/oarpg/t1/reports/wrapannx.pdf> [hereinafter VOLUNTARY EMISSIONS REDUCTION PROGRAM].

as early as the 1970s,¹⁷ and the 1990 CAA amendments in Section 172(c)(9) require that state implementation plans (“SIPs”) in non-attainment areas mandate specific measures if areas fail to attain a NAAQS, to be “included in the plan revision[s] as contingency measures.”¹⁸ Thus, Section 111(d) may permit contingency measures procedurally “similar to” measures deemed acceptable for SIPs created under Section 110 for NAAQS,¹⁹ even if 111(d) does not explicitly provide for contingencies.

Congress’s 1977 amendments to the CAA designated national parks over 6,000 acres and wilderness areas over 5,000 acres as “Class I” areas protected from air pollution causing visibility impairment.²⁰ However, even though Congress recognized that regional haze impaired the visibility of Class I areas and originated from sources far from the areas themselves, at that time models and monitoring networks were not sophisticated enough to promulgate effective regulations of regional haze.²¹ Accordingly, Congress’s 1990 amendments to the CAA created the Grand Canyon Visibility Transport Commission (“GCVTC”) to assess the currently available scientific information regarding adverse impacts on visibility from growth around the Grand Canyon National Park, identify clean air corridors, and recommend long-term strategies to address regional haze.²²

In 1996, GCVTC submitted a report with recommendations to the EPA for improving visibility in sixteen mandatory Class I areas on the Colorado Plateau.²³ The report’s discussion of stationary sources recommended a contingency program: if voluntary measures failed to achieve regional SO₂ emission targets, GCVTC suggested triggering a regional, market-based cap-and-trade program.²⁴ The cap-and-trade program would begin one year after emissions exceeded reduction milestones and require compliance five years thereafter.²⁵ The program would also include monitoring and reporting requirements and make emissions and allowance data publicly available.²⁶

In 1999, the EPA announced the Regional Haze Rule, which mandated state and federal cooperation to improve visibility in 156 Class I areas, including the Grand Canyon, Yosemite, and other national parks and wilderness areas.²⁷ States

17. See Reorganization and Republication, 36 Fed. Reg. 22,369, 22,403 (1971); see also ARNOLD W. REITZE JR., AIR POLLUTION CONTROL LAW: COMPLIANCE AND ENFORCEMENT 89, 96 (2001).

18. 42 U.S.C.A. § 7502(c)(9) (West 2014).

19. 42 U.S.C.A. § 7411(d)(1) (West 2014).

20. See U.S. ENVTL. PROT. AGENCY, *Maps of Protected Areas*, <http://www.epa.gov/visibility/maps.html> (last updated May 31, 2012).

21. VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at 1.

22. 42 U.S.C.A. § 7492(f) (West 2014); VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at 3.

23. VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at 3.

24. *Id.*

25. *Id.* at 4.

26. *Id.*

27. U.S. ENVTL. PROT. AGENCY, *EPA’s Regional Haze Program*, <http://www.epa.gov/oaqps001/visibility/program.html> (last updated May 31, 2012).

were required to develop and implement SIPs through 2018 that would reduce emissions of fine particles and their precursors that cause visibility impairment,²⁸ specifically SO₂, nitrogen oxides, and particulate matter, under Section 169A of the CAA.²⁹

The EPA's final rule allowed the nine western states included in GCVTC's analysis—Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming—as well as 211 nearby tribes to implement recommendations from GCVTC's 1996 report.³⁰ States that chose to implement GCVTC's recommendations were required under Section 309 of the final rule to submit an Annex modifying and updating GCVTC's report by October 1, 2000 for the EPA's review and approval.³¹ WRAP had been established in 1997 as a stakeholder-based successor organization to GCVTC, and WRAP developed the Annex to GCVTC's report.³² WRAP's Annex set quantitative emission milestones for large, industrial stationary source-generated SO₂ emissions for the reporting years 2003, 2008, 2013, and 2018.³³ These milestones reflected steady and continuing reductions such that greater reasonable progress would be achieved in excess of Best Achievable Retrofit Technology (“BART”).³⁴ BART is equivalent to retrofitting 250 tons per year for sources built between 1962 and 1977 and operating without modern emissions controls.³⁵ WRAP estimated that these reductions will equal approximately 170,000 tons of SO₂ by 2018.³⁶

WRAP's Annex also established a backstop emissions trading program triggered when the region fails to achieve a milestone.³⁷ The trading program grants each emission source tradable allowances that determine how much the source may emit.³⁸ Any source exceeding its allowances may purchase allowances from another source under its limit.³⁹ Whether a milestone has been met is determined by a tracking system that requires states and tribes to compile an annual SO₂ emission inventory from all regulated sources within their jurisdictions.⁴⁰ This

28. *Id.*

29. *See* 40 C.F.R. § 51 (2015).

30. 40 C.F.R. § 51.309 (2015); VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at 7.

31. VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at 7.

32. *Id.* at 8.

33. *Id.* at 15.

34. *Id.*

35. EPA Regional Haze Regulations and Guidelines for Best Available Retrofit Technology (BART) Determinations, 40 C.F.R. § 51 (2015), available at http://ndep.nv.gov/baqp/planmodeling/docs/bart_rule-070605.pdf.

36. VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at ii.

37. *Id.* at i.

38. *See id.* at 40.

39. W. GOVERNORS' ASS'N, W. REG'L AIR P'SHIP, *Market Trading Forum: About*, <http://www.wrapair.org/forums/mtf/about.html> (last visited Dec. 20, 2014).

40. VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at 24. Under Section 309(d)(12), the EPA permitted tribes around the Colorado Plateau to comply under the Annex in the same manner as states, regardless of whether such tribes had participated in GCVTC. 40 C.F.R. § 51.309(d)(4)(iii) (2015). To comply,

tracking system measures compliance through a three-year rolling average to ensure that the trading program is not triggered by data collection fluctuations, unusual weather, or other confounding factors.⁴¹ The contingency program is triggered within one year of a determination that a milestone is missed.⁴² Once the program is triggered, the milestones become enforceable regional caps.⁴³ Participating states appoint a Tracking Systems Administrator to track allowances and emissions for compliance determination and program assessment.⁴⁴ The administrator allocates to states an allowance budget, and each state can distribute the allowances to regulated sources within its jurisdiction.⁴⁵ One allowance is equivalent to the right to emit one ton of SO₂, and the allowances are redistributed every five years after the trigger date.⁴⁶ Operators of SO₂ sources in participating states can also trade allowances.⁴⁷

Although the EPA gave the nine eligible states the option of using the nationally applicable provisions of the Regional Haze Rule under Section 308 requiring the BART standard, which is lower than Section 309's "better than BART" standard, compliance through Section 309 enabled the states to reduce their costs of modeling and data acquisition by capitalizing on the work of the GCVTC.⁴⁸ If states that opted to exercise Section 309 provisions failed to submit their implementation plans by 2003, they would instead have to meet the Section 308 deadline for SIP submission in 2007.⁴⁹

Eligible states that elect not to opt into Section 309 of the Regional Haze Rule are subject to Section 308.⁵⁰ Section 308 requires each state to submit SIPs reducing regional haze pollutants in Class I areas within its borders and those Class I areas affected by its emissions.⁵¹ Due by December 17, 2007, the plans required states to set goals providing for "reasonable progress towards achieving

the EPA required that tribes submit Tribal Implementation Plans ("TIPs"); however, because Section 309(c) does not require tribes to develop TIPs by a specific date, they are omitted from this analysis. See 40 C.F.R. § 51.309(d)(12) (2015); see also VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at 9.

41. VOLUNTARY EMISSIONS REDUCTION PROGRAM, *supra* note 16, at 24.

42. *Id.* at 4.

43. *Id.* at 64.

44. *Id.*

45. *Id.* at 65.

46. *Id.* at 29, 42.

47. *Id.* at 64.

48. *Id.* at 8.

49. GHITA LEVENSTEIN CARROLL, INTERACTION BETWEEN RENEWABLE ENERGY MARKETS AND CARBON MARKETS: OPTIMAL POLICIES TO MEET SOCIETAL GOALS 96 (2008); Approval and Promulgation of Implementation Plans, State of Colorado, Regional Haze State Implementation Plan, 77 Fed. Reg. 76,871 (Dec. 31, 2012), available at <https://www.federalregister.gov/articles/2012/12/31/2012-31192/approval-and-promulgation-of-implementation-plans-state-of-colorado-regional-haze-state#h-11>.

50. 40 C.F.R. § 51.309(a) (2015); W. GOVERNORS' ASS'N, *supra* note 39.

51. 40 C.F.R. § 51.308 (2015); W. GOVERNORS' ASS'N, WEST REG'L AIR P'SHIP, *Section 308 Haze Planning Support, Including BART*, <http://www.wrapair.org/SIPStatus/308/> (last visited Dec. 20, 2014).

natural visibility conditions” by 2064.⁵² Section 308 requires that implementation plans include emission limitations representing BART.⁵³ BART must be based on the best system of continuous emission control technology available and applied to specific categories of major stationary sources, primarily electrical generating units that emit large quantities of SO₂ and NO_x.⁵⁴

Examining the behavior of eligible states opting in or out of the backstop program informs the use of contingencies under Section 111(d). State policymakers who craft contingency programs under 111(d) and federal authorities who approve them could glean lessons from these states’ willingness to participate in the backstop and use these lessons to encourage participation in future contingencies.

II. STATE PARTICIPATION IN THE BACKSTOP

Of the nine states in the GCVTC region, only three—New Mexico, Utah, and Wyoming, in addition to the city of Albuquerque/Bernalillo County that has air quality planning responsibilities within New Mexico—ultimately exercised the Section 309 option (hereinafter, the “Section 309 Entities”).⁵⁵ Evaluating the utility of the backstop program as an analog to contingencies under 111(d) requires discerning states’ reasons for not participating, tracking the contours of implementation plans submitted by participants, and analyzing how the EPA and federal courts received these plans. From these lessons, contingency programs under Section 111(d) can improve incentives for state participation, manage the EPA’s expectations for states as implementers, and manage the courts’ expectations for the EPA as a regulator. States preferred the less rigorous Section 308 because of Section 309’s earlier deadlines and more stringent requirements. States were also deterred from complying under Section 309 due to litigation and responsive rule revisions—despite the fact that courts generally endorsed the backstop as a valid exercise of the EPA’s delegated authority.⁵⁶ The behavior of eligible states can be categorized into three groups: (A) states that opted out of Section 309 from the beginning; (B) states that initially opted in by submitting SIPs in 2003 and eventually withdrew; and (C) states that remained in the program after submitting SIPs in 2003.

52. 40 C.F.R. § 51.308 (2015).

53. *Id.*; W. GOVERNORS’ ASS’N, *supra* note 39.

54. 40 C.F.R. § 51.308 (2015); W. GOVERNORS’ ASS’N, *supra* note 39.

55. AIR RES. SPECIALISTS, INC., WESTERN REGIONAL AIR PARTNERSHIP REGIONAL HAZE RULE: REASONABLE PROGRESS SUMMARY REPORT pt. 5, at 1 (2013), available at http://www.wrapair2.org/documents/Full%20Report/WRAP_RHRPR_Full_Report_without_Appendices.PDF; W. GOVERNORS’ ASS’N, *supra* note 39.

56. *See* Ctr. for Energy & Econ. Dev. v. EPA, 398 F.3d 653, 660 (D.C. Cir. 2005).

A. STATES OPTING NOT TO PARTICIPATE IN THE BACKSTOP

Five states—the Section 309 Entities, Arizona, and Oregon—initially exercised the Section 309 option by submitting plans to the EPA by the December 1, 2003 deadline; the other four eligible states—California, Colorado, Idaho, and Nevada—did not.⁵⁷

California had jurisdiction over twenty-nine Class I areas,⁵⁸ none of which were located on the Colorado Plateau under Section 309.⁵⁹ A California Environmental Protection Agency’s Air Resources Board (“CARB”) report concluded that WRAP’s regional analyses “generally lack[ed] the specificity needed to develop SIPs for California’s Federal Class I areas.”⁶⁰ Pending resolution of legal challenges to the standards, the report also estimated that SIPs encompassing the regional haze standards would be ready between 2006 and 2008—early enough to meet the Section 308 deadline but too late for Section 309 eligibility.⁶¹

An earlier meeting of CARB’s Interagency Air and Smoke Council in January 2003 referred to California as a “Section 308 state.”⁶² Apparently to conserve time and resources, the Council decided to submit the state’s regional haze SIP later alongside California’s particulate matter implementation plan.⁶³ CARB discussed using the implementation plans developed by other states and approved by the EPA under Section 309 as “useful guidance,” suggesting that California adopted a wait-and-see approach by observing the EPA’s response to Section 309 SIPs to increase its chances of submitting an acceptable SIP under Section 308.⁶⁴

Colorado similarly opted not to submit an implementation plan under Section 309, even though there are six eligible Class I areas within its jurisdiction.⁶⁵ Colorado’s regional haze planning process was fraught with delays. On January 15, 2009, the EPA found that Colorado failed to submit a SIP addressing regional haze by the 2007 deadline under Section 308.⁶⁶ Once the EPA made this finding,

57. W. REG’L AIR P’SHIP, 2012 REGIONAL SO₂ EMISSIONS AND MILESTONE REPORT (2014), available at http://www.cabq.gov/airquality/air-quality-control-board/documents/2012_Milestone_Report_WRAP_For_Public_Comment.pdf.

58. CAL. ENVTL. PROT. AGENCY AIR RES. BD., CALIFORNIA REGIONAL HAZE PLAN 1-2 (2009), available at http://www.arb.ca.gov/planning/reghaze/final/rhplan_final.pdf.

59. See 40 C.F.R. § 51.309 (2015), 51.309(b)(1) (2015).

60. CAL. ENVTL. PROT. AGENCY AIR RES. BD., STRATEGIC PLAN FOR RESEARCH: 2001 TO 2010, APRIL 2003 UPDATE 9, 19 (2003), available at <http://www.arb.ca.gov/research/apr/plan/lrplan/spla0403.pdf>.

61. *Id.*

62. CAL. ENVTL. PROT. AGENCY AIR RES. BD., IASC MEETING SUMMARY 2 (2003) (Jan. 22-23, 2003 meeting), available at <http://www.arb.ca.gov/smp/progdev/iasc/jan03mtsm.doc>.

63. *Id.*

64. *Id.*

65. 40 C.F.R. § 51 (2015); COLO. AIR POLLUTION CONTROL DIV., COLORADO VISIBILITY AND REGIONAL HAZE STATE IMPLEMENTATION PLAN FOR THE TWELVE MANDATORY CLASS I FEDERAL AREAS IN COLORADO 41 (2011), available at https://www.colorado.gov/pacific/sites/default/files/AP_PO_Regional-Haze-State-Implementation-Plan-January-2011_0.pdf.

66. Approval and Promulgation of Implementation Plans, State of Colorado, Regional Haze State Implementation Plan, 77 Fed. Reg. 76,871 (Dec. 31, 2012), available at <https://www.federalregister.gov/articles/2012/12/>

CAA Section 110(c)(1)(A) required the EPA to promulgate a Federal Implementation Plan (“FIP”) by January 2011 unless Colorado submitted a SIP that the agency approved within that period.⁶⁷ Colorado submitted a SIP several months after the deadline in May of 2011, and environmental groups sued the EPA for its failure to promulgate a FIP. The resulting consent decree required a final rulemaking addressing regional haze in Colorado, which the EPA promulgated in 2012.⁶⁸ By 2009, Colorado still had not established reasonable progress goals for each Class I area.⁶⁹ Given the lethargic progress of the Colorado Air Pollution Control Division, the expedited time frame required by Section 309 appears to have been unattainable.

Similar to Colorado, Idaho and Nevada declined to participate in the backstop, and both states’ choices of not opting in are prudent because, if they opted in, they would be subject to multiple standards set forth by Sections 308 and 309. Idaho is responsible for setting the reasonable progress goals of three Class I areas, none of which are subject to treatment under Section 309(b)(1).⁷⁰ Idaho also had “few and minor SO₂ sources.”⁷¹ Nevada similarly had relatively little at stake in regulating regional haze: the EPA designated only one Class I area in the state and found Nevada ineligible for 309(b)(1) treatment.⁷² Section 309(a) and (g) required states opting in to comply with Section 308 for their emissions that affect Class I areas within or outside the state but are not covered by Section 309.⁷³ While Idaho and Nevada’s Section 309 SIPs would address only their impairment of the sixteen designated Class I areas (all of which are located in other states), Idaho and Nevada would also have to comply with Section 308 for the Class I areas within their borders, thus subjecting regulated parties to multiple standards. Although all states must comply with Section 308 if their emissions affect out-of-state Class I areas ineligible under Section 309, Idaho and Nevada

31/2012-31192/approval-and-promulgation-of-implementation-plans-state-of-colorado-regional-haze-state#h-11.

67. 42 U.S.C.A. § 7410(c)(1) (West 2014); Approval and Promulgation of Implementation Plans, State of Colorado, Regional Haze State Implementation Plan, 77 Fed. Reg. 76,871 (Dec. 31, 2012), available at <https://www.federalregister.gov/articles/2012/12/31/2012-31192/approval-and-promulgation-of-implementation-plans-state-of-colorado-regional-haze-state#h-11>.

68. Approval and Promulgation of Implementation Plans, State of Colorado, Regional Haze State Implementation Plan, 77 Fed. Reg. 76,871 (Dec. 31, 2012), available at <https://www.federalregister.gov/articles/2012/12/31/2012-31192/approval-and-promulgation-of-implementation-plans-state-of-colorado-regional-haze-M-state#h-11>.

69. See COLO. AIR POLLUTION CONTROL DIV., *supra* note 65, at 6, 9.

70. 40 C.F.R. § 51.309(b)(1) (2015); STATE OF IDAHO DEP’T OF ENVTL. QUALITY, REGIONAL HAZE PLAN (2010), available at http://www.deq.idaho.gov/media/62133-regional_haze_sip_1010.pdf.

71. Telephone Interview with Pat Cummins, former co-director of the Western Regional Air Partnership (Mar. 17, 2014).

72. 40 C.F.R. § 51.309(b)(1) (2015); STATE OF NEV. BUREAU OF AIR QUALITY PLANNING, PLANNING AND MODELING BRANCH, *Regional Haze and BART* (Jan. 10, 2013), <http://ndep.nv.gov/baqp/planmodeling/rhaze.html>.

73. 40 C.F.R. § 51.309(a) (2015).

would always have to comply under both standards if they opted in, even if they could contain their emissions from interstate travel. Keeping track of two SIP standards can deter states from opting in because it is cumbersome and expensive for state agencies.

B. STATES THAT OPTED TO PARTICIPATE IN THE BACKSTOP AND
EVENTUALLY WITHDREW

Arizona and Oregon initially exercised the Section 309 option by submitting plans to the EPA by the 2003 deadline.⁷⁴ However, legal challenges, rule revisions, and regulatory delays ultimately pushed Arizona and Oregon to withdraw from the backstop program. This section discusses the implications of the two states' withdrawal from the backstop.

Oregon withdrew its participation by not resubmitting a Section 309 SIP after the EPA did not approve any initial SIPs due to legal challenges.⁷⁵ The agency revised Section 309 twice in response to litigation, and the second revision in October of 2006 prompted Oregon's withdrawal.⁷⁶

Arizona ceased participation in 2010.⁷⁷ Its jurisdiction includes twelve Class I areas, of which four are subject to 309(b)(1).⁷⁸ In its SIP promulgated in 2011, Arizona's Air Quality Division explained that those states opted to submit SIPs under Section 309 in 2003 after four years of consulting with tribes, states, affected sources, four EPA regional offices, federal land managers, and other stakeholders.⁷⁹ It lamented that "[l]itigation has had a major influence on regional haze regulations."⁸⁰

Even before the 2003 submissions were made, the Regional Haze Rule was challenged by industry and environmental groups in *American Corn Growers Association v. EPA*, 291 F.3d 1 (D.C. Cir. 2002). The court vacated the rule in part because it violated the CAA by requiring states to engage in regional, rather than source-by-source, analysis in making BART determinations.⁸¹ Although the CAA required states to take into account the degree of improvement in visibility from BART controls placed on a given source, the EPA's regulations improperly

74. W. REG'L AIR P'SHIP, 2011 REGIONAL SO₂ EMISSIONS AND MILESTONE REPORT ES-1 (2013), available at <http://www.wrapair2.org/pdf/Final%202011%20Milestone%20Report.pdf> [hereinafter 2011 REGIONAL SO₂ EMISSIONS AND MILESTONE REPORT].

75. *Id.* at 1.

76. *Id.*

77. *Id.*

78. 40 C.F.R. § 51.309(b)(1) (2015); ARIZ. DEP'T OF ENVTL. QUALITY, ARIZONA STATE IMPLEMENTATION PLAN: REGIONAL HAZE UNDER SECTION 308 OF THE FEDERAL REGIONAL HAZE RULE 2 (2011), available at <http://www.azdeq.gov/environ/air/haze/download/haze308sip.pdf>.

79. ARIZ. DEP'T OF ENVTL. QUALITY, *supra* note 78, at 7.

80. *Id.* at 8.

81. *Am. Corn Growers Ass'n v. EPA*, 291 F.3d 1, 6 (D.C. Cir. 2002) (per curiam).

required states to consider this improvement only on a group or “area wide” basis.⁸² In response, the EPA revised the rule on July 6, 2005.⁸³

The EPA’s 2005 revisions did not substantively affect states’ plans submitted under Section 309. The court of appeals, however, handed down another ruling in *Center for Energy and Economic Development (CEED) v. EPA*, 398 F.3d 653 (D.C. Cir. 2005), which did. The court granted a petition challenging WRAP’s Annex and backstop trading program.⁸⁴ The court held that the Section 309 regional backstop is a valid exercise of CAA-delegated authority because the alternative was demonstrated to make greater progress than BART.⁸⁵ But, similar to *American Corn Growers v. EPA*, the court took issue with the methodology that the EPA required states to use to satisfy these demonstrations.⁸⁶ Pursuant to this decision, the EPA promulgated revisions to its methodology that became effective on December 12, 2006.⁸⁷ The EPA removed the requirement that states “use a ‘group BART’ benchmark for evaluating alternative programs and providing western States and tribes the opportunity to reconsider the milestones absent that invalid analytical requirement.”⁸⁸

According to the Arizona Department of Environmental Quality, it took states about one year after the 2006 final rule to revise the trading program’s milestones.⁸⁹ By that time, all western states had missed the December 17, 2007 submission deadline for Section 309 SIP revisions and 309(g) SIPs (pertaining to other Class I areas within the Section 309-eligible states).⁹⁰ Arizona had submitted a SIP revision in 2008 but did not have time to complete critical revisions on stationary source reduction requirements.⁹¹ This exclusion fatally tainted the re-submittal.⁹² Furthermore, the EPA explained that this failure was not cured by the fact that the EPA had deemed Arizona’s earlier submissions “complete” by operation of law. In January of 2009, the EPA found Arizona delinquent in its failure to submit a SIP.⁹³

82. *Id.*

83. ARIZ. DEP’T OF ENVTL. QUALITY, *supra* note 78, at 8.

84. Regional Haze Regulations, Revisions to Provisions Governing Alternative to Source-Specific Best Available Retrofit Technology (BART) Determinations, 71 Fed. Reg. 60,612 (Oct. 13, 2006), available at <https://www.federalregister.gov/articles/2006/10/13/06-8630/regional-haze-regulations-revisions-to-provisions-governing-alternative-to-source-specific-best>.

85. *Ctr. for Energy & Econ. Dev. v. EPA*, 398 F.3d 653, 654 (D.C. Cir. 2005).

86. *See id.*

87. ARIZ. DEP’T OF ENVTL. QUALITY, *supra* note 78, at 8.

88. Regional Haze Regulations, Revisions to Provisions Governing Alternative to Source-Specific Best Available Retrofit Technology (BART) Determinations, 71 Fed. Reg. at 60,612 (Oct. 13, 2006), available at <https://www.federalregister.gov/articles/2006/10/13/06-8630/regional-haze-regulations-revisions-to-provisions-governing-alternative-to-source-specific-best>.

89. ARIZ. DEP’T OF ENVTL. QUALITY, *supra* note 78, at 8-9.

90. *Id.* at 9.

91. 40 C.F.R. § 52 (2015).

92. *Id.*

93. *See* ARIZ. DEP’T OF ENVTL. QUALITY, *supra* note 78, at 9.

Originally, Arizona was to submit a SIP addressing both provisions (Section 309(d)(4) and Section 309(g)) of the Regional Haze Rule for which it was found delinquent.⁹⁴ In 2010, however, to avoid promulgating a FIP under Section 308 (because the regulatory gap left by Arizona's earlier deficient plans triggered the EPA's FIP duty under Section 308), the EPA requested that Arizona submit a plan under Section 308.⁹⁵ To expedite re-submittal, Arizona incorporated its previously articulated strategies concerning Class I areas ineligible under Section 309 into the Section 308 SIP for all of Arizona's Class I areas.⁹⁶

C. SECTION 309 ENTITIES REMAINING IN THE BACKSTOP PROGRAM:
FORMULATING SIPS SATISFACTORY TO EPA

Arizona's withdrawal from the program left three states and one locality remaining: New Mexico, Utah, Wyoming, and the city of Albuquerque.⁹⁷ Although the withdrawals of other states prompted revisions to regional milestones, these entities have endured despite litigation, rule revisions, and back-and-forth with the EPA following SIP re-submittals. Their success in promulgating a viable backstop informs the SIP approval process in the 111(d) context when contingencies are involved. The following section discusses each Section 309 entity's SIP approval process.

Albuquerque has independent delegation for CAA purposes, and its County Air Quality Control Board adopted the initial regional haze SIP on November 12, 2003.⁹⁸ Albuquerque has since amended its SIP twice in response to the EPA's comments to the locality on November 3, 2004, and again in 2007, as well as in response to the EPA's revised regulations that addressed court holdings.⁹⁹ The County Air Quality Control Board adopted its revised SIP on August 13, 2008.¹⁰⁰ In 2010, the EPA conveyed to the county and New Mexico that there were certain technical issues with the trading program; in particular, the proposed 2018 milestone of 234,624 tons of SO₂ was deficient because it did not account for recent emission inventories or the EPA's revised BART requirements.¹⁰¹ Alber-

94. *Id.*

95. *Id.*

96. *Id.*

97. 2011 REGIONAL SO₂ EMISSIONS AND MILESTONE REPORT, *supra* note 74, at ES-1.

98. See Albuquerque-Bernalillo Cnty. Air Quality Control Bd., Notice of Hearing, 22 N.M. Reg. 255, 256 (Mar. 31, 2011), available at <http://www.nmcpr.state.nm.us/nmregister/xxii/xxii06/xxii06.pdf>; CITY OF ALBUQUERQUE ENVTL. HEALTH DEP'T AIR QUALITY DIV., SECTION 309 REGIONAL HAZE STATE IMPLEMENTATION PLAN ELEMENT: ALBUQUERQUE-BERNALILLO COUNTY, NEW MEXICO (2008), available at http://www.cabq.gov/airquality/documents/pdf/regional_haze_SIP_final.pdf.

99. Notice of Hearing, *supra* note 98.

100. *Id.*

101. CITY OF ALBUQUERQUE ENVTL. HEALTH DEP'T AIR QUALITY DIV., SECTION 309 REGIONAL HAZE STATE IMPLEMENTATION PLAN ELEMENT: ALBUQUERQUE-BERNALILLO COUNTY, NEW MEXICO i (2011), available at http://www.cabq.gov/airquality/air-quality-control-board/documents/AttachmentA_RegionalHazeSIP_Adopted_6811signed.pdf.

que revised its SIP to address these issues on July 28, 2011, and the EPA approved the plan on November 29, 2012.¹⁰²

Albuquerque's revised SIP addressed the EPA's concerns. Specifically, if the plan's milestones are exceeded, and within six months of triggering the backstop, each participating state submits and circulates to the others a draft allocation report with proposed allocations and budgets.¹⁰³ The Tracking System Administrator compiles the drafts and allots budgets.¹⁰⁴ The new SIP eliminated the headroom from earlier emissions estimates that had accounted for uncertainty and inexperience in monitoring emissions,¹⁰⁵ producing a lower emissions projection for 2018.

The New Mexico Environment Department, which administers nine Class I areas, one of which affects the Colorado Plateau,¹⁰⁶ submitted its SIP revisions on July 5, 2011—its only re-submittal after 2003.¹⁰⁷ Between submissions, the New Mexico Environment Department circulated revisions among in-state administrative entities and amended its SIP to include milestones for NO_x and particulate matter. The revisions also incorporated the EPA's revised source-by-source BART standard for SO₂ milestones.¹⁰⁸ Most notably, the revisions adjusted milestones to account for Arizona's withdrawal from the program.¹⁰⁹ These revisions show that changes in participation in the backstop burdened those states remaining in the program by prompting additional modifications to the milestones and demanding extra time, effort, and resource expenditures to accomplish those modifications. The EPA approved the SIP on November 27, 2012, with the exception of the NO_x BART determination for the San Juan Generating Station, which remained subject to a FIP.¹¹⁰

New Mexico submitted its 2013 regional haze progress report to the EPA on March 11, 2014, after receiving comments from the agency on its draft progress report.¹¹¹ The EPA focused on Section 309(d)(10)(i)(A)'s requirement to describe

102. Approval and Promulgation of State Implementation Plans, City of Albuquerque-Bernalillo County, New Mexico, 77 Fed. Reg. 71,119 (Nov. 29, 2012), *available at* <http://www.gpo.gov/fdsys/pkg/FR-2012-11-29/pdf/2012-28822.pdf>.

103. CITY OF ALBUQUERQUE ENVTL. HEALTH DEP'T AIR QUALITY DIV., *supra* note 101, at 24.

104. *Id.* at 36.

105. Notice of Hearing, *supra* note 98.

106. N.M. ENV'T DEP'T, NEW MEXICO STATE IMPLEMENTATION PLAN: REGIONAL HAZE SECTION 309(G) 1 (2010), *available at* http://www.nmenv.state.nm.us/aqb/reghaz/documents/Proposed_RH_SIP_309g.pdf.

107. Approval and Promulgation of State Implementation Plans, State of New Mexico, 77 Fed. Reg. 70,693 (Nov. 27, 2012), *available at* <http://www.gpo.gov/fdsys/pkg/FR-2012-11-27/pdf/2012-28591.pdf>.

108. N.M. ENV'T DEP'T AIR QUALITY BUREAU, REVISION TO THE NEW MEXICO STATE IMPLEMENTATION PLAN FOR REGIONAL HAZE 52 (Dec. 20, 2010), *available at* http://www.nmenv.state.nm.us/aqb/reghaz/documents/NM309RegionalHazeSIP_revised_12202010.pdf.

109. *Id.* at 82.

110. Approval and Promulgation of State Implementation Plans, State of New Mexico, 77 Fed. Reg. 70,693 (Nov. 27, 2012), *available at* <http://www.gpo.gov/fdsys/pkg/FR-2012-11-27/pdf/2012-28591.pdf>.

111. N.M. ENV'T DEP'T AIR QUALITY BUREAU, REGIONAL HAZE (Mar. 19, 2014), http://www.nmenv.state.nm.us/aqb/reghaz/regional-haze_index.html.

the status of implementation measures within a SIP directed at achieving reasonable progress goals.¹¹² The agency advised that this description should include a discussion of the benefits associated with each measure and a quantification of the emission reductions achieved, including any measures beyond those in the SIP that resulted in additional visibility benefits.¹¹³ The EPA noted that it “would value a discussion of any current efforts or plans for future consultation . . . with Texas and other non-members of the WRAP . . . having emissions that may impact visibility” in New Mexico.¹¹⁴ The state and regional administrators corresponded with each other not only in preparation for the initial SIP approvals, but also during the drafting of subsequent progress reports. This suggests that states and the agency can anticipate give-and-take at all stages of the contingency’s operation in the 111(d) context.

On December 14, 2012, the EPA partially approved and partially rejected Utah’s SIP revision submitted in 2011.¹¹⁵ The EPA disapproved of the NO_x and particulate matter BART determinations under 309(d)(4)(vii).¹¹⁶ The agency approved the section of the state’s September 9, 2008 SIP pertaining to the backstop program, noting that this revision in tandem with the 2011 submission supersedes the SIPs Utah submitted in 2003 and 2004.¹¹⁷ The EPA found that Utah’s most recent revision was deficient because it did not perform the five-factor analysis required by the Regional Haze Rule and BART Guidelines, under which a state must take into account “the costs of compliance, the energy and non-air-quality environmental impacts of compliance, any pollution control equipment in use at the source, the remaining useful life of the source, and the degree of visibility improvement that may be expected.”¹¹⁸ In approving Utah’s backstop-related plan elements, the EPA explained that, because Utah participated in a regional planning process, Section 308(d)(3)(ii) requires Utah to include all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process.¹¹⁹ This apportionment must be documented on a “technical basis” quantitatively demonstrating reasonable progress.¹²⁰ Utah satisfied these requirements.¹²¹

112. Letter from Guy Donaldson, Chief, EPA Region 6 Air Planning Section, to Rita Bates, Planning Section Chief, N.M. Env’t Dep’t Air Quality Bureau 1-2, *available at* http://www.nmenv.state.nm.us/aqb/reghaz/documents/EPAComments-NMhazepressreport_Submittal.pdf.

113. *Id.*

114. *Id.* at 3.

115. Approval, Disapproval and Promulgation of State Implementation Plans, State of Utah, 77 Fed. Reg. 74,355 (Dec. 14, 2012), *available at* <http://www.gpo.gov/fdsys/pkg/FR-2012-12-14/pdf/2012-29406.pdf>.

116. *Id.* at 74,357.

117. *Id.*

118. *Id.* at 74,363 (quoting Regional Haze Regulations and Guidelines for Best Available Retrofit Technology (BART) Determination, 70 Fed. Reg. 39,104, 39,158 (July 6, 2005)).

119. *Id.* at 74,367.

120. *Id.*

121. *Id.*

The EPA approved Wyoming's Section 309 SIP for the SO₂ backstop and milestones after the state submitted revisions in January of 2011 and April of 2012.¹²² Wyoming also submitted additional SIP revisions in 2003, 2004, and 2008.¹²³

Despite the progress achieved in the approvals of SIP provisions addressing the backstop, some groups have legally challenged the program.¹²⁴ WildEarth Guardians, a nonprofit environmental organization dedicated to protecting "wild-life, wild places, wild rivers, and [the] health of the American West,"¹²⁵ challenged the backstop on the ground that the EPA's approval of the plans would result in more emissions of SO₂ pollution from the region's coal-fired power plants.¹²⁶ The group alleged that participating states overestimated the regional emissions that would actually result under BART, inflating the benchmark.¹²⁷ Oral arguments took place on March 20, 2014,¹²⁸ and the Tenth Circuit denied the group's petition for review in October 2014, finding that the EPA's determination that the trading program was better than BART was not arbitrary and capricious.¹²⁹ Even if this ruling is a victory for the contingency program, frequent litigation nonetheless impacts states' willingness to proceed under Section 309 given the uncertainty of the backstop's legality and high likelihood of rule revisions.

States opting into Section 309 coped with readjusting their milestones as other states belatedly opted out. These states had to manage direct feedback from the EPA's regional administrators as well as the EPA's rule revisions during all stages of developing and securing approval for the backstop. Even despite these efforts, some challenge the stringency of regional milestones in court and seek their invalidation.

III. ANALYSIS OF LESSONS LEARNED

A backstop cap-and-trade program is a favorable option for states seeking voluntary, flexible measures to achieve compliance using existing programs

122. Approval and Promulgation of State Implementation Plans, State of Wyoming, 77 Fed. Reg. 73,926 (Dec. 12, 2012), available at <https://www.federalregister.gov/articles/2012/12/12/2012-29985/approval-and-promulgation-of-state-implementation-plans-state-of-wyoming-regional-haze-rule>.

123. *Id.*

124. See *WildEarth Guardians v. EPA*, No. 12-9596, 2014 WL 5334682 (10th Cir. Oct. 21, 2014) (denial of petition for review).

125. WILDEARTH GUARDIANS: A FORCE FOR NATURE, <http://www.wildearthguardians.org/> (last visited Dec. 20, 2014).

126. See Tripp Baltz, *Tenth Circuit Hears Arguments in Lawsuit over Benchmark for Regional Haze Plans*, 45 ENV'T REP. 889 (2014).

127. *Id.*

128. *Id.*

129. *WildEarth Guardians v. EPA*, No. 12-9596, 2014 WL 5334682 (10th Cir. Oct. 21, 2014) (denial of petition for review).

bolstered by a second-order contingency. Nonetheless, participation in the backstop can be hampered by disparate deadlines, program requirements, eligibility restrictions, state withdrawals from the program, and legal challenges.

First, the agency must carefully consider the disincentives created by different deadlines for alternative programs. The backstop's two alternatives, Section 308 and 309, required implementation plans in 2007 and 2003, respectively.¹³⁰ Given the initial promulgation of the Regional Haze Rule in 1999,¹³¹ states foregoing Section 309's backstop option were given about twice as long to compile and submit SIPs.¹³² Such asymmetrical alternatives could have created an artificial preference for states to default to Section 308, disincentivizing the Section 309 backstop. Colorado's failure to meet even the later deadline, despite its jurisdiction over six of the sixteen eligible Class I areas under 309(b)(1), is a telling example.¹³³ The agency should place the Section 111(d) contingency option on equal footing with alternative compliance deadlines. Doing so would help states feel secure that other states participating in the contingency program are unlikely to withdraw due to delays or rule revisions, and it would maximize participation and effectiveness. However, when there are legitimate policy reasons for mandating different deadlines, such as accommodating different levels of complexity in alternate programs, the agency and stakeholders should consider the effect of deadlines on states' willingness to adopt one program over another. Otherwise, states (like California in the SO₂ backstop context) will adopt a wait-and-see approach to glean lessons from earlier submissions to smooth their own path to securing regulatory SIP approval.

The same principle applies to the standard to which those states opting into a backstop program will be held. The "better than BART" standard applied to alternatives to Section 308 (namely, Section 309's backstop) is more stringent than is Section 308(e)'s requirement of BART.¹³⁴ The agency is validly exercising its statutory authority to demand the heightened demonstration under *CEED v. EPA*, which objected to the *methodology* of demonstrating "better than BART," but not to the "better than BART" requirement generally.¹³⁵ The standard is intuitive given the agency's skepticism that states would craft a lax backstop program to more easily comply absent a more rigorous demonstration (the

130. Approval and Promulgation of Implementation Plans, State of Colorado, Regional Haze State Implementation Plan, 77 Fed. Reg. 76,871 (Dec. 31, 2012), available at <https://www.federalregister.gov/articles/2012/12/31/2012-31192/approval-and-promulgation-of-implementation-plans-state-of-colorado-regional-haze-state#h-11>; 2011 REGIONAL SO₂ EMISSIONS AND MILESTONE REPORT, *supra* note 74, at 2.

131. 40 C.F.R. § 51 (2015).

132. See 2011 REGIONAL SO₂ EMISSIONS AND MILESTONE REPORT, *supra* note 74, at 1-2.

133. 40 C.F.R. § 51 (2015); COLO. AIR POLLUTION CONTROL DIV., *supra* note 65.

134. 40 C.F.R. § 51.308 (2015).

135. *Ctr. for Energy & Econ. Dev. v. EPA*, 398 F.3d 653, 660 (D.C. Cir. 2005).

allegation in *WildEarth Guardians*).¹³⁶ Litigation concerning BART and “better than BART” demonstration methodologies, and the EPA’s ample feedback to WRAP to correct its approach of demonstrating “better than BART,”¹³⁷ both suggest that states encountered difficulty making the required demonstrations. Under Section 111(d), states may face similar problems showing that their first-order programs achieve the desired level of reductions.

Thus, clear guidance from the EPA from the beginning, including the initial rulemaking, on how to adequately demonstrate compliance, can save time and resources in the long run for the agency and states. Moreover, if the EPA more clearly explains how to calculate milestones, states may be more amenable to collaborating. Increased transparency in emission reduction computation strengthens the channels of communication between states, regulated sources, and the EPA, and avoids disagreements in compliance demonstrations.¹³⁸ Under Section 111(d), this takeaway depends on the EPA’s degree of involvement in crafting the backstop. When the EPA is more heavily involved in developing the backstop or promulgates precise regulations, states have to make fewer cumbersome demonstrations to prove their alternative programs are statutorily sound.

Nonetheless, detailed regulations may allow parties to find flaws in the regulations and sue. Litigation and corresponding delays from responsive regulatory revisions created long delays in the approval of the SO₂ backstop and ultimately pushed Oregon and Arizona out of the program.¹³⁹ These delays particularly affected Section 309 states, which, unlike Section 308 states, had to submit SIPs prior to EPA’s 2005 and 2006 rule revisions. The rule revisions prompted additional SIP revisions and re-submittals. States complying under Section 309 as of 2003 did not secure approval of their programs earlier than did states complying under Section 308; moreover, they expended additional efforts by submitting revisions between 2003 and 2007 and by adjusting milestones as Oregon and Arizona belatedly opted out.¹⁴⁰ Litigation risks lead to an additional back-and-forth with the EPA, which is especially cumbersome if backstop alternatives must comply earlier than other alternatives and before cases have percolated through the courts or before the EPA has responded with revisions.

Some of this added effort is attributable to some states’ preference for submitting a satisfactory SIP over complying with a FIP. In particular, Wyoming is currently facing a FIP to address deficiencies in its SIP’s treatment of NO_x and

136. See *WildEarth Guardians v. EPA*, No. 12-9596, 2014 WL 5334682 (10th Cir. Oct. 21, 2014) (denial of petition for review).

137. See Letter from Callie A. Videtich, Director, EPA Region 8 Air and Radiation Program, to David Finley, Administrator, Wyo. Dep’t of Env’tl. Quality, Air Quality Div., available at <http://wyomingoutdoorcouncil.org/PDFs/EPA-Oct09Letter-RgnlHaze.pdf>.

138. See *id.*

139. See 2011 REGIONAL SO₂ EMISSIONS AND MILESTONE REPORT, *supra* note 74, at 1.

140. Approval and Promulgation of State Implementation Plans, State of Wyoming, 77 Fed. Reg. 73,926 (Dec. 12, 2012), available at <http://www.gpo.gov/fdsys/pkg/FR-2012-12-12/pdf/2012-29985.pdf>.

particulate matter.¹⁴¹ Wyoming's Department of Environmental Quality views the FIP as impinging on its authority, unresponsive to local interests, and invalid under the law.¹⁴²

Finally, subjecting Section 309 Entities to Section 308 for other Class I areas that they control or impact deters their participation because those states could save time, money, and personnel in promulgating one SIP under a single set of regulations—Section 308. However, because GHGs are more ubiquitous than is regional haze around the Colorado Plateau,¹⁴³ fewer eligibility restrictions for any 111(d) backstop should be imposed or warranted.

CONCLUSION

As demonstrated by the state participation in WRAP's backstop SO₂ trading program, the regulating agency must carefully consider the incentives for different compliance mechanisms. Of the nine states eligible to participate in WRAP's backstop, only three states and the city of Albuquerque used the contingency option. The contingency program's earlier deadlines, more stringent requirements, and eligibility restrictions caused this nonparticipation. Likewise, delays from legal challenges and the resulting revisions to the rules and milestones required participating states to resubmit their SIPs and motivated Oregon and Arizona to withdraw. Providing states opting out of the backstop program four additional years—twice as long—to submit their SIPs to the EPA under the Regional Haze Rule created incentives for states to forego compliance under Section 309. These states also enjoyed the benefits of feedback from the EPA and the D.C. Circuit through rule revisions and court holdings finalized prior to their SIP deadlines.

An inclusive regulatory framework that either treats alternatives under Section 111(d) evenhandedly, or clearly justifies disparate treatment of alternative programs, deadlines, stringency, or eligibility requirements, will avoid creating perverse incentives for regulated sources to decline their preferred, first-order methods of compliance. Undeterred participation will improve the efficacy of contingencies under Section 111(d). Affording states flexibility in using existing programs supported by second-order backstops could ease the transition of states and regulated parties into a GHG emission reduction regime under the CAA and could facilitate more cost-effective and meaningful reductions.

141. Approval, Disapproval and Promulgation of Implementation Plans, State of Wyoming, Regional Haze State Implementation Plan, Federal Implementation Plan for Regional Haze, 79 Fed. Reg. 5,031 (Jan. 30, 2014), available at <https://www.federalregister.gov/articles/2014/01/30/2014-00930/approval-disapproval-and-promulgation-of-implementation-plans-state-of-wyoming-regional-haze-state>.

142. TODD PARFITT, STATE IMPLEMENTATION PLAN FOR REGIONAL HAZE AND EPA'S PROPOSED FEDERAL IMPLEMENTATION PLAN 9 (2013), available at <http://wvia.org/wp-content/uploads/2013/09/todd-parfit.pdf>.

143. See Harvey M. Sheldon, *Ozone Air Quality Rule Changes Pose Management Challenges*, 11 ABA AIR QUALITY COMM. NEWSLETTER, no. 2, Apr. 2008, at 30.