CAP-AND-TRADE UNDER THE CLEAN AIR ACT?: RETHINKING SECTION 115

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April 2010

As comprehensive climate legislation stagnates in Congress, the possibility of greenhouse gas ("GHG") regulation under the Environmental Protection Agency's ("EPA") existing Clean Air Act authority as the sole federal means of addressing climate change becomes increasingly likely. Whether EPA has existing authority to implement a cap-and-trade program for GHGs, which many believe is the cornerstone of an effective and efficient approach to controlling emissions, has as yet no definitive answer. The various sections of the Clean Air Act that could act as authority for such a program have their own legal ambiguities and practical limitations.[1]

[1] The three Clean Air Act sections that have been most frequently cited to provide authority for a cap-and-trade program are § 111 (New Source Performance Standards), Title VI (addressing stratospheric ozone protection), and

One largely overlooked section – § 115 on "International Air Pollution"[2] – however, is potentially quite powerful in its implications for the establishment of cap-and-trade under the Clean Air Act.

Upon a finding that pollution in the United States is causing or contributing to air pollution "which may reasonably be anticipated to endanger public health or welfare in a foreign country" (or at the request of the Secretary of State who alleges such pollution exists) and a reciprocity finding that the affected foreign country gives the U.S. "essentially the same rights with respect to the prevention or control of air pollution occurring in that country as is given that country" by the section, § 115 authorizes the EPA to order the states in which emissions are occurring to revise their state implementation plans ("SIPs") to address the foreign endangerment.[3] As explained in this paper, the requisite foreign endangerment and reciprocity findings can likely be made, and the issuance of a call for SIP revisions could incentivize state action to mitigate GHGs through a cap-and-trade program without the burdensome EPA regulations that many assume must be taken to exercise § 115 authority.

Where § 115 has not been completely overlooked due to its historical lack of use, it has been dismissed as an option for GHG regulation because of assumptions that the section may be implemented only if GHGs are deemed criteria pollutants and EPA establishes National Ambient Air Quality Standard ("NAAQS") for GHGs.[4] Because atmospheric concentrations of GHGs are uniform, establishing NAAQS for GHGs would place the entire country either in attainment

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National Ambient Air Quality Standards (NAAQS) implemented through the states. For a discussion of the various avenues and an evaluation of legality, effectiveness, efficiency, and fairness under each avenue, see Inimai M. Chettiar & Jason A. Schwartz, *The Road Ahead: EPA's Options and Obligations for Regulating Greenhouse Gases* (Inst. for Policy Integrity, N.Y. Univ. School of Law, April 2009) [hereinafter *The Road Ahead*].

[2] Clean Air Act, 42 U.S.C. § 7415 (2010).

[3] *Id.*

[4] The single observer who has published literature explicitly disclaiming the assumed connection between § 115 and criteria pollutants is Roger Martella. *See* Roger Martella & Matthew Paulson, *Regulation of Greenhouse Gases Under Section 115 of the Clean Air Act*, 43 BNA DAILY ENV'T REP. 1, 8 (March 9, 2009).

status, which would have little meaningful effect on controlling GHG emissions, or in nonattainment status, which would require states to implement onerous requirements and is consequently viewed as an excessively burdensome approach to mitigation.[5] The assumption that NAAQS must be implemented in order for EPA to exercise its § 115 authority arises because the authority § 115 grants the EPA Administrator is the authority to issue a call under § 110 for revisions of SIPs, which are understood as "state implementation plans for national primary and secondary ambient air quality standards."[6]

This paper shows, however, that neither statutory language nor legislative history links pollutants regulated by § 115 to pollutants with established NAAQS, otherwise referred to as criteria pollutants. This conclusion squarely contradicts the conventional view, and even EPA's own view,[7] but is not as incredible as it may at first appear. The Congressional Research Service's report to Congress regarding potential regulation of GHGs under the Clean Air Act acknowledges EPA's assumption that "§ 115 could only be exercised if EPA were to promulgate a NAAQS for greenhouse gases," and enigmatically notes that "this is arguable."[8] This paper makes the argument against the conventional understanding of § 115.

The following discussion first shows that the statutory language reveals no requirement that the pollution addressed by § 115 be criteria pollutants. An exploration of the Clean Air

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[5] *See, e.g.*, Robert R. Nordhaus, *New Wine Into Old Bottles: The Feasibility of Greenhouse Gas Regulation Under the Clean Air Act*, 15 N.Y.U. ENVTL. L.J. 53, 60-61 (2007).

[6] Clean Air Act § 110, 42 U.S.C. § 7410.

[7] In the Advance Notice of Proposed Rulemaking for Regulating Greenhouse Gas Emissions Under the Clean Air Act, EPA notes that "[t]he Administrator could exercise his authority under [§ 115] if EPA were to promulgate a NAAQS for GHG . . . . Section 115 could not be used to require states to incorporate into their SIPs measures unrelated to attainment or maintenance of a NAAQS." 73 Fed. Reg. 44,482-83. *See also The Road Ahead* 80-81 (analyzing § 115 only in the context of NAAQS).

[8] Larry Parker & James E. McCarthy, *Climate Change: Potential Regulation of Stationary Greenhouse Gas Sources Under the Clean Air Act* 13 (CONG. RESEARCH SERV., May 14, 2009) [hereinafter CRS Report]. The absence of any clear link between § 115 and criteria pollutants is noted elsewhere as well. *See* Veronique Bugnion & David M. Reiner, *A Game of Climate Chicken: Can EPA Regulate Greenhouse Gases Before the U.S. Senate Ratifies the Kyoto Protocol?*, 30 ENVTL. L. 491, 512 (2000) ("[S]ection 115 is ambiguous because it allows for SIP revision, but it does not specify whether the Administrator would be allowed to revise the list of criteria pollutants itself.").

Act's legislative history reveals three legislative trends that substantiate the claim that § 115 pollutants need not be criteria pollutants. First, Congress's preference gradually shifted from a conference approach, which gathered relevant government agencies and the polluter to collaboratively negotiate the abatement of identified pollution, to state implementation of air quality standards as the most effective means to address air pollution. Second, as Congress increasingly departed from a conference approach to an air quality standard approach implemented through the states, its original uniform treatment of all pollution (whether intrastate, interstate, or international) necessarily bifurcated between abatement of pollution with air quality standards and abatement of all other pollution, including international pollution. Third, the eventual incorporation of international pollution into the SIP framework was *not* accompanied by dictates that air quality standards be established for international pollution, but rather was accompanied by amendments requiring that SIPs address Clean Air Act requirements unrelated to NAAQS.

These three legislative trends suggest a distinction that has become obfuscated over time:[9] state implementation is not synonymous with the implementation of air quality standards. Certainly, SIPs implement regulations to attain and maintain NAAQS, but states have all along been empowered and entrusted with the abatement of all types of air pollution, not just those with established air standards; and Congress has explicitly amended the Clean Air Act to require

[9] EPA's earlier understanding of § 115 mirrors the understanding discussed in this paper. In letters written in January 1981 to the Secretary of State and a U.S. Senator, which are discussed further in Part III of this paper, then EPA Administrator Costle explained that § 115 "is broadly drafted to encompass all forms of air pollution-related endangerment to public health or welfare and is not limited to interference with U.S. air quality standards or significant deterioration programs . . . ." Letter from Douglas M. Costle, EPA Administrator (Jan. 13, 1981), Appendix A of *New York v. Thomas*, 613 F.Supp. 1472, 1486 (1985). This understanding of § 115 is repeated in scholarship during that time. *See, e.g.*, Bennett A. Caplan, *The Applicability of Clean Air Act Section 115 to Canada's Transboundary Acid Precipitation Problem*, 11 B.C. ENVTL. AFF. L. REV. 539, 570 (1983).

SIPs to implement requirements unassociated with air quality standards, including addressing pollution under § 115.

I. The Statutory Language

As this section shows, the language of § 115 as well as § 110 (which is referenced in § 115) leaves open the possibility that EPA has authority to issue SIP revision calls for pollutants for which NAAQS have not been established.

A. Section 115 "International Air Pollution"

Section 115(a) identifies two conditions – upon a foreign endangerment finding or at the request of the Secretary of State – under which EPA is required to give notice to the Governor of a state in which emissions originate:

> "Whenever the Administrator, upon receipts of reports, surveys or studies from any duly constituted international agency has reason to believe that *any air pollutant or pollutants* emitted in the United States cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country or whenever the Secretary of State requests him to do so with respect to such pollution which the Secretary of State alleges is of such nature, the Administrator shall give formal notification thereof to the Governor of the State in which such emissions originate."[10]

Significantly, the reference to "*any* pollutant or pollutants emitted in the United States" does not limit these § 115 pollutants to criteria pollutants.

Section 115(b) then presents a SIP revision under § 110 as the remedy for such pollution (hereinafter referred to as "international pollution" or "§ 115 pollutants").

> "The notice of the Administrator shall be deemed to be a finding under section 7410(a)(2)(H)(ii) of this title which requires a plan revision with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminate the endangerment referred to in subsection (a) of this section. Any foreign country so affected by such emission of pollutant or pollutants shall be

[10] 42 U.S.C. § 7415(a) (emphasis added).

> invited to appear at any public hearing associated with any revision of the appropriate portion of the applicable implementation plan."[11]

Section 115(c) mandates reciprocity such that the section applies only to a "foreign country which the Administrator determines has given the United States essentially the same rights with respect to the prevention or control of air pollution occurring in that country as is given that country by this section."[12] Clearly, nothing in the face of § 115 itself suggests that the pollutants to which the section refers must be ones for which NAAQS have been established.

B. Section 110 "State Implementation Plans for National Primary and Secondary Ambient Air Quality Standards"

A look at the referenced § 7410(a)(2)(H)(ii) confirms that the pollutant discussed in § 115 need not be one for which NAAQS has been established. Two points are worth noting in the statutory language of § 110. First, SIPs are to be revised to incorporate provisions unrelated to attainment or maintenance of NAAQS. Second, just as a SIP is required to regulate *any air pollutant* that would interfere with another state's attainment or maintenance of NAAQS, it is required to comply with § 115's requirement to avoid endangering public health or welfare in another country.

To begin, § 110(a)(2) lists various required components of a SIP. One such required element, identified in subsection (H), is that the plan "provide for revision" under two circumstances:

> "(i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditions methods of attaining such standard, and
> (ii) except as provided in paragraph 3(c), whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate to attain the national ambient air quality standard for which it

[11] *Id.* § 7415(b).
[12] *Id.* § 7415(c).

> implements *or to otherwise comply with any additional requirements established under this chapter*;"[13]

Subparagraph 110(a)(2)(H)(ii) with the italicized language above is the section specifically referenced in § 115 under which the EPA may call for SIP revisions to address international pollution. The use of "or" to preface the requirement to comply with "any additional requirements" is important: SIPs can be revised to comply with requirements separate and apart from NAAQS-related requirements.[14]

Reference to SIP revisions to incorporate requirements other than NAAQS-related requirements is also seen in another section of § 110:

> "Whenever the Administrator finds that the applicable implementation plan for any area is substantially inadequate to attain or maintain the relevant national ambient air quality standard, to mitigate adequately the interstate pollution transport described in section 7506a of this title or 7511c of this title, *or to otherwise comply with any requirements of this chapter*, the Administrator shall require the State to revise the plan as necessary to correct such inadequacies."[15]

Section 110 also specifically references § 115 in conjunction with the requirement that a state prevent emissions of any air pollutant that would interfere with another state's NAAQS attainment or maintenance. In § 110(a)(2)(D), the Act requires that SIPs contain provisions addressing two circumstances: "(i) prohibiting . . . any source or other types of emissions activity within the State from emitting *any air pollutant* in amounts which will" interfere with another state's attainment or maintenance of NAAQS or measures to protect visibility, and "(ii) insuring

[13] *Id.* § 7410(a)(2)(H) (emphasis added). The exceptions identified in paragraph 3(c) refer to various instances in which SIPs need not be revised, and are irrelevant to the discussion of § 115.
[14] This same statutory language is noted by the Congressional Research Service as a reason why it is "arguable" whether § 115 can only be exercised for criteria pollutants. *See* CRS Report, *supra* note 8, at 13.
[15] 42 U.S.C. § 7410(k)(5) (emphasis added).

compliance with the applicable requirements of sections 7426 and 7415 [§ 115] of this title (relating to interstate and international pollution abatement)."[16]

Subparagraph (i)'s requirement that states prohibit emission of *any air pollutant* that would interfere with NAAQS in another state is significant. The reference to "any" air pollutant indicates that the statute is written broadly enough to require states to control non-criteria emissions in one state that interfere with another state's NAAQS. In the case of § 115 pollutants, the affected country will of course not have NAAQS in place for any pollutant. If states are required to regulate "any air pollutant" that affects another state's NAAQS (and not simply a criteria pollutant that affects another state's NAAQS), by implication, states are required to regulate any air pollutant that endangers another country pursuant to § 115. As will be further explained, this understanding is substantiated in the Act's legislative history.

II. The Legislative History

That the statutory language appears to allow for SIP revisions to incorporate § 115 requirements relating to non-criteria pollutants is actually not surprising given the history of § 115 and Congress's apparent intent for that section in the statutory scheme.

As this section explains, pollution originating in a U.S. state that endangers a foreign country (that is, international pollution) was originally handled in exactly the same manner as intrastate and interstate pollution – through abatement conferences. When the Act was amended in 1967 to permit the federal government to set air quality standards for the first time, the abatement conference provisions were restructured to make clear that they covered air pollution, including international pollution, that was *not* addressed by air quality standards. In 1970, the amendments that created the framework for the modern Clean Air Act clearly distinguished for

[16] *Id.* § 7410(a)(2)(D)(i)-(ii) (emphasis added).

the first time between intra- and interstate pollution, on the one hand, and international pollution, on the other, and while it established the NAAQS and SIP procedures for the former, it retained the conference mechanism for the latter. Section 115 took on its current form in 1977, when Congress explained that the conference procedures were less effective than SIP procedures and consequently decided to extend SIPs to include abatement of international pollution as well.

As noted earlier, three legislative trends are evident in this history. First, air pollution abatement shifted from a collaborative conference approach to a more enforcement-oriented SIP approach because Congress, saying nothing of air quality standards, viewed enforceable state implementation as the more effective way to abate pollution. The gradual introduction of air quality standards into the legislative scheme necessitated a change in the originally uniform treatment of various types of pollution (intrastate, interstate, and international), given that not all pollutants had air quality standards and that air quality standards might not exist in the "recipient" state or country in the case of cross-boundary pollution. Ultimately, the reconvergence of the abatement method for the various types of pollution – that is, abatement through the SIP mechanism – resulted from a desire for effectiveness, and far from mandating air quality standards for all the pollutants now addressed by SIPs, Congress made a clear effort to empower states to incorporate non-air quality standard-related requirements into SIPs.

A. Early uniform treatment of all air pollution through abatement conferences

The earliest federal approach to air pollution primarily involved providing research funding and technical assistance to the states.[17] The 1963 amendments to the Air Pollution Control Act of 1955 were the first to provide for actual abatement of air pollution by delineating procedures for abatement conferences to address intra- and interstate pollution. The 1965

[17] Air Pollution Control Act of 1955, Pub. L. No. 159, 69 Stat. 322 (1955).

amendments maintained the conference procedures and included abatement of international pollution for the first time.

Under § 5 "Abatement of Air Pollution" of the 1963 amendments, "[t]he pollution of the air in any State or States which endangers the health or welfare of any persons, shall be subject to abatement as provided" by the conference procedures.[18] As the following explanation shows, the conference procedures – then the only means to address air pollution – were cumbersome, to say the least. The approach relied on the federal government's "limited persuasive powers as mediator between the states and the polluters" and "presum[ed] the states' eagerness to control the emissions in question."[19]

The Secretary of Health, Education, and Welfare ("the Secretary"), at the request of the Governor of any state in which intra- or interstate pollution was "alleged to endanger the health or welfare of persons" or at the Secretary's own initiative when he had reason to believe such pollution existed, was authorized to call a conference of relevant city, state, and interstate agencies to discuss the "occurrence of air pollution subject to abatement" and "the adequacy of measures taken toward abatement of the pollution."[20] If, after the conference, the Secretary believed that effective progress toward abatement was not being made, he was to "recommend . . . the necessary remedial action" to the appropriate city, state, or interstate agencies.[21]

If these recommended actions had not been taken after six months, the Secretary was authorized to call a public hearing. The hearing board was to make findings as to whether

[18] Clean Air Act of 1963, Pub. L. No. 88-206, § 5(a), 77 Stat. 392, 396 (1963).
[19] David D. Doniger, *Federal Regulation of Vinyl Chloride: A Short Course in the Law and Policy of Toxic Substances Control,* 7 ECOLOGY L.Q. 497, 574 n.393. During the first five years of enactment, the conference procedures were invoked in nine interstate areas, but provided little improvement in air quality. 1 WILLIAM H. RODGERS, JR., RODGERS' ENVIRONMENTAL LAW § 3.33 n.22 (West 2009); Sidney Edelman, *Air Pollution Abatement Procedures Under the Clean Air Act*, 10 ARIZ. L. REV. 30, 35 (1968).
[20] Pub. L. No. 88-206, § 5(c)(1)-(3), 77 Stat. 396-97.
[21] *Id.* § 5(d), 77 Stat. 397.

pollution endangering health or welfare was occurring and "whether effective progress toward abatement [was] being made."[22] If such pollution was occurring and abatement was inadequate, the hearing board recommended measures necessary for abatement. If these actions were not taken, the Secretary was authorized to request the Attorney General to bring a suit on behalf of the United States (in the case of interstate pollution), or provide assistance to the State in judicial proceedings or bring suit on behalf of the United States at the request of the Governor (in the case of intrastate pollution).

The 1965 amendments, which maintained the conference mechanism, incorporate international pollution for the first time. The amendments added a new subparagraph in the original section on pollution abatement, after (A) conference regarding interstate pollution called at the request of Governor, (B) conference regarding intrastate pollution called at the request of Governor, and (C) conference regarding interstate pollution called on the Secretary's own initiative:

> "(D) Whenever the Secretary, upon receipt of reports, surveys, or studies from any duly constituted international agency, has reason to believe that any pollution referred to in subsection (a)[23] which endangers the health or welfare of persons in a foreign country is occurring, or whenever the Secretary of State requests him to do so with respect to such pollution which the Secretary of State alleges is of such nature, the Secretary of Health, Education, and Welfare shall give formal notification thereof to the air pollution control agency of the municipality [, the State, and the interstate region] where such discharge or discharges originate . . . and shall call promptly a conference of such agency or agencies."[24]

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[22] *Id.* § 5(e)(2), 77 Stat. 397.

[23] Subsection (a) refers to "the pollution of the air in any State or States which endangers the health or welfare of any persons." Pub. L. No. 88-206 § 5(a).

[24] Clean Air Act Amendments of 1965, Pub. L. No. 89-272, § 102(a), 79 Stat. 992, 995 (1965). The statute's use of the singular in referring to a "foreign country" reveals the understanding of international pollution at that time as pollution that might affect a neighboring country, specifically Canada or Mexico. The House Report on the 1965 amendments notes that "[a]s a member of the North American community, the United States cannot in good conscience decline to protect its neighbors from pollution which is beyond their legal control." H.R. REP. NO. 89-899 (1965), *reprinted in* 1965 U.S.C.C.A.N. 3608, 3612-13. This historical understanding does not limit the scope of this provision in practice, however, as it is an "elementary rule of statutory construction" that "the singular includes the plural, and vice-versa." Yule Kim, *Statutory Interpretation: General Principles and Recent Trends* 9

The Secretary was authorized to "invite the foreign country which may be adversely affected by the pollution to attend and participate in the conference," and the representative of that country was to "have all the rights of a State air pollution control agency" for purposes of the conference and subsequent proceedings.[25] In the event that a public hearing was held and the hearing board's recommended abatement actions were not taken, the foreign country, like a state affected by interstate pollution, was authorized to "request the Attorney General to bring a suit on behalf of the United States to secure abatement of the pollution."[26]

By adding international pollution to the existing list of pollution subject to abatement, the statute treats international pollution in exactly the same way as intra- and interstate pollution and even grants the foreign country the same rights as states in the abatement conference, public hearing, and judicial enforcement. As of 1965, then, the Clean Air Act used the abatement conference as the sole mechanism to treat all air pollution problems, whether they endangered public health or welfare in the same state the emissions originated, in another state, or even in another country.

B. The 1967 amendments: Introduction of air quality standards and growing differentiation in the treatment of international pollution

The Air Quality Act of 1967 involved a wholesale rewriting of the existing legislation and introduced the precursors to the modern NAAQS and SIP. Section 107 of the 1967 amendments authorized the Secretary to define "air quality control regions" throughout the country, and to issue air quality "criteria" necessary for "the protection of the public health and

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(CONG. RESEARCH SERV. Aug. 31, 2008). Congress's underlying concern was the need to address damaging pollution emitted in the U.S. that could not be addressed by the affected country, arguably regardless of the location of the affected country (whether a neighboring country or one halfway across the world).

[25] *Id.*

[26] *Id.* § 102(b), 79 Stat. 995-96.

welfare" and "pollution control techniques . . . necessary to achieve levels of air quality set forth in [the issued] criteria."[27] Section 108 "Air Quality Standards and Abatement of Air Pollution," then sets forth two ways in which states and localities were to abate air pollution: through implementation plans and through abatement conferences.[28] As this next section shows, the existence of two approaches to abatement was not redundant, and instead reveals a growing differentiation in the treatment of (1) pollution with established air quality standards and (2) other alleged air pollution, including international pollution.

Section 108(c) sets forth the predecessor of the modern SIP. The section permits states to adopt "ambient air quality standards applicable to any designated air quality control region or portions thereof within such State" and to adopt "a plan for the implementation, maintenance, and enforcement of such standards of air quality adopted."[29] The Secretary approves the state plan if he determines that the state ambient air quality standards are consistent with the federally-established air quality criteria and recommended control techniques issued in § 107. Where the state does not establish air quality standards for the air quality control regions within its jurisdiction, the Secretary does so.[30] If the Secretary finds that the air quality of any control region does not meet the standards established (whether by the state or the federal government), the Secretary is authorized to request the Attorney General to bring suit on behalf of the United States (in the case of interstate pollution), or to provide assistance to the State in judicial proceedings or to bring suit on behalf of the United States upon request of the Governor (in the case of intrastate pollution).[31]

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[27] Clean Air Act Amendments of 1967, Pub. L. No. 90-148, § 107, 81 Stat. 485, 490-91 (1967).
[28] *See generally* Edelman, *supra* note 19, at 31 ("Although the statute was amended in 1967 to provide a new federal enforcement system based on air quality control regions, it preserved (with minor amendments) the earlier – and more general approach – of the 1963 Act.").
[29] Pub. L. 90-148, § 108(c)(1), 81 Stat. 492.
[30] *Id.* § 108(c)(2), 81 Stat. 492.
[31] *Id.* § 108(c)(4), 81 Stat. 493.

Section 108(d) essentially incorporates the entire conference procedures delineated in the 1965 amendments. It retains the identification (A) through (D) of the four types of conferences (relating to interstate pollution called at the request of the Governor, intrastate pollution called at the request of the Governor, interstate pollution called on the Secretary's own initiative, and international pollution) as well as the public hearing and judicial enforcement provisions. Section 108(d) also retains the language of the earlier amendments that referred to "air pollution which is *alleged to endanger* the health or welfare of persons" with respect to conferences requested by Governors,[32] and air pollution that the Secretary "*has reason to believe*" endangers health or welfare with respect to conferences initiated by the Secretary.[33] This language is key to understanding why the implementation plan and conference procedures are not redundant means of abatement: whereas the state plans were to implement ambient air quality standards pursuant to federally-established criteria, the conference procedures were retained to address pollution that was not subject to existing air quality standards and was merely "alleged" or "believe[d]" to be a danger to public health or welfare. A critical point with respect to international pollution specifically is that it is *necessarily* pollution that is "alleged" or "believed" to cause a foreign endangerment, as the foreign country naturally will not have federally-established air quality criteria by which to measure endangerment.

At this stage in the early history of the Clean Air Act, then, international pollution began its gradual differentiation from pollutants with established air quality standards. The key is that this differentiation arose because of the unique nature of the relationship between air quality standards and international pollution (where the affected jurisdiction necessarily had no air quality standards), *not because* states were authorized to abate only pollution with air quality

[32] *Id.* § 108(d)(1)(A)-(B), 81 Stat. 494.
[33] *Id.* § 108(d)(1)(C)-(D), 81 Stat. 494-95.

standards and *not because* states were deemed incapable of implementing measures to address foreign endangerment. Recall, after all, that whether under § 108(c)'s state implementation of air quality standards or whether under § 108(d)'s conference procedures, states were required to take abatement action, with judicial enforcement as the ultimate stick. States, in other words, were legislatively authorized to address foreign endangerment, but simply did not do so through an air quality standard approach. Subsequent amendments clarified the distinction between international pollution and pollution with air quality standards, while also clarifying that state plans could cover requirements beyond those associated with air quality standards.

C. The 1970 amendments: Disassociation between international pollution and NAAQS

Notwithstanding the embryonic forms of air quality criteria and standards and state implementation plans conceived of in the 1967 amendments, the 1970 amendments are the birth of the Clean Air Act as we know it today. They established the framework for NAAQS[34] and SIPs, moved the international pollution provision to § 115 where it remains today, drew a clear distinction between intra-/interstate pollution and international pollution for the first time, and further solidified the distinction made in the 1967 amendments between the treatment of pollutants with air quality standards and those not covered by such standards.

The 1970 amendments significantly expanded the earlier distinction between state plans to implement air quality standards and conference procedures to abate other alleged pollution. Section 110 is newly written to solely address "implementation plans," and the remainder of the earlier § 108 relating to conference procedures is redesignated as § 115 "Abatement by Means of

[34] That the air quality criteria established by the 1965 amendments was a predecessor of the modern NAAQS is evidenced by the 1970 amendments' call for the EPA to establish NAAQS for the pollutants that had already been issued air quality criteria (which at the time included sulfur oxide, particulate mater, carbon monoxide, hydrocarbons, and photochemical oxidants). Clean Air Act Amendments of 1970, Pub. L. No. 91-604 §4(a), 84 Stat. 1676, 1678 (1970) (adding § 108(a)); H.R. REP. NO. 91-1146, at 6 (1970), *reprinted in* 1970 U.S.C.C.A.N. 5356, 5362.

Conference Procedure in Certain Cases." The amendment also breaks apart the (A) through (D) listing of intrastate, interstate, and international pollution seen in earlier legislation that treated all types of pollution uniformly, and instead groups intra- and interstate pollution together as § 115(b) and separately identifies international pollution under § 115(c).

This new distinction is notable because the amendments then add § 115(b)(4), *applicable only to intra- and interstate pollution*: "A conference may not be called under this subsection with respect to an air pollutant for which (at the time the conference is called) a national primary or secondary ambient air quality standard is in effect under Section 109."[35] The fact that this prohibition was not also included under § 115(c) dealing with international pollution allows for two related possibilities: (1) that a conference may be called for an international pollutant for which a NAAQS is in effect, and more broadly (2) that a conference may be called for an international pollutant, *regardless* of whether a NAAQS is in effect for that pollutant.

The implications of the careful legislative insertion of § 115(b)(4), without a similar insertion under § 115(c) for international pollution, relate back to the unique nature of international pollution. Where Clean Air Act air quality standards necessarily do not exist in the foreign country in which the international pollution is endangering public health or welfare, it makes little sense to regulate through the mechanism of air quality standards. That Congress nevertheless intended for states and localities to abate the foreign endangerment is evident in its maintenance of the conference procedures for international pollution that had originally been used to address all forms of pollution.

In short, the 1970 amendments bifurcate abatement mechanisms between (1) the NAAQS approach as the exclusive approach for intra- and interstate criteria pollutants and (2) the conference approach for all international pollution and non-criteria intra- and interstate pollutants.

[35] Pub. L. No. 91-604 §4(a), 84 Stat. 1688 (amending newly-redesignated § 115).

In Congress's own words, newly-amended § 115 "retains the enforcement provision of existing law for abatement of international pollution problems and abatement against certain sources of pollution not covered by these amendments [that is, the newly-established NAAQS]."[36] What is increasingly evident, then, is that Congress intended for the international pollution contemplated by § 115 to be abated, regardless of whether NAAQS were established for those pollutants.

D. The 1977 amendments: Establishing § 115 in its current form

The 1977 amendments established the current § 115, which has remained unchanged since that legislation. In light of what was widely perceived as "the patent failure of the conference procedures,"[37] the 1977 amendments did away with all abatement conferences and changed the abatement mechanism for international pollution from conference procedures to SIP revisions. The amendments, not coincidentally, added for the first time the requirement that SIPs contain provisions to comply with requirements other than those necessary for the attainment or maintenance of NAAQS.

Section § 115, renamed "International Air Pollution" as a standalone section separate from intra- and interstate pollution abatement, reads in 1977 as it does today. The original House bill had no such provision; it was the Senate version that included § 115 "so that it provides only a mechanism for the abatement of air pollution arising in this country and endangering the health or welfare of persons in a foreign country."[38] The Senate's rationale behind shifting the abatement approach for international pollution from conference procedures to SIP revision is telling:

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[36] CONF. REP. NO. 91-1783, at 6, *reprinted in* 1970 U.S.C.C.A.N. 5374, 5380 (1970).
[37] RODGERS' ENVIRONMENTAL LAW, *supra* note 19, § 3.33.
[38] S. REP. NO. 95-127, at 56-57 (1977). *See also* H.R. CONF. REP. NO. 95-564, *reprinted in* 1977 U.S.C.C.A.N. 1502, 1517 (1977).

> "Before 1970 the principal legal means for control or abatement of air pollution was the enforcement conference procedure. The Clean Air Act Amendments of 1970 substantially changed that . . . . The basic tool of enforcement became the State implementation plan with its enforceable requirements for every source. This replaced the abatement conference, a lengthy and uncertain process in which all parties—State, local, and Federal agencies and the polluter—were convened to negotiate a schedule for control of the emissions alleged to cause the problem.
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> The 1970 amendments, however, retained in section 115 the conference procedures for abatement of interstate air pollution, as well as international situations. The authority of section 115 has not been used, and the implementation plan approach for interstate air quality control regions has proved to be more successful in dealing with air pollution problems involving more than one State.
>
> In fact, *the committee believes that the implementation plan approach is also more appropriate than the enforcement conference for international air pollution.* Section 115 as revised, therefore, provides that the determination that emissions of air pollutants in the United States are endangering the health or welfare of citizens of a foreign country will require the State in which the source of those emissions is located to revise its implementation plan to control those emissions."[39]

Notably, this explanation of the clear preference for replacing ineffective conference procedures with the "more appropriate" SIP procedures references only *effectiveness* as the rationale for the change, and does not break with the then-apparent understanding that international pollution need not have an established NAAQS to be deemed an endangerment in a foreign country. In other words, the distinction arises between state implementation and the existence of air quality standards – Congress evidently viewed state implementation of international pollution abatement as desirable, without creating any associated requirement that air quality standards be established for such pollution.

The other provisions of § 110 mentioned in Part I were enacted in 1977, concurrently with the newly-created § 115, and strongly bolster a claim that Congress knew very well that international pollution would not necessarily have air quality standards and nevertheless wanted SIPs to be the abatement method for such pollution. First, Congress amended § 110(a)(2)(H)(ii)

[39] S. REP. NO. 95-127, at 57 (1997).

in 1977, the section referenced in the newly-created § 115 to explicitly add the language that required SIPs to provide for plan revisions beyond those revisions necessary to attain NAAQS. Specifically, the amendment inserts after the provision requiring plans to provide for revisions "to achieve the national ambient air quality primarily or secondary standard which it implements": "*or to otherwise comply with any additional requirements established under the Clean Air Act Amendments of 1977.*"[40] The strong implication is that the § 115 regulations are precisely those "additional requirements" – unrelated to NAAQS – that are required to be incorporated through plan revisions.

Furthermore, the 1977 amendments added the provision that exists today requiring states in their SIPs to prohibit "any air pollutant" from interfering with another state's NAAQS attainment or maintenance.[41] The implication is that it is the air quality standard in the *affected* jurisdiction that matters in the case of cross-border pollution, and that state plans are required to implement means to avoid detrimental effects in another state. An international endangerment finding under § 115 is equivalent to a finding that a state is failing to meet its NAAQS, which are set at a level to prevent endangerment. Where states are required to prevent "any" air pollutant from interfering with NAAQS attainment or maintenance in another state (in other words, from endangering public health or welfare in that other state), states would also be required, by extension, to regulate any air pollutant (not only a criteria pollutant) from endangering public health or welfare where the affected jurisdiction is a country where NAAQS are not in effect.

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[40] Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 108(a)(6)(A), 91 Stat. 685 (1977).

[41] *Id.* § 108(a)(1) ("Section 110(a)(2)(E) of such Act is amended to read as follows:
'(E) it contains adequate provisions (i) prohibiting any stationary source within the State from emitting any air pollutant in amounts which will (I) prevent attainment or maintenance by any other State of any such national primary or secondary ambient air quality standard, or (II) interfere with measures required to be included in the applicable implementation plan for any other State under part C to prevent significant deterioration of air quality or to protect visibility, and (ii) insuring compliance with the requirements of section 126, relating to interstate pollution abatement;'."). The addition of reference to § 115 and international pollution in subsection (ii) was made in the 1990 amendments. Clean Air Act of 1990, Pub. L. No. 101-549, 104 Stat. 2399, 2404 (1990).

Ultimately, the legislative trends that take shape in a close reading of the history of the Clean Air Act's treatment of international pollution provides insight into Congress's intent. When the ineffectiveness of the conference procedures prompted moves to an air quality standard approach implemented through the states, the unique nature of international pollution, where air quality standards do not exist in the endangered foreign country, led to differential treatment of international pollution from pollutants with established air quality standards. Congress's frustration with the cumbersome conference procedures manifested in its decision in 1977 to abate international pollution through state plans. Nothing was said of the need to establish air quality standards for the international pollution that now fell under the purview of the SIP mechanism, however, given that NAAQS are domestic standards to avoid endangerment and § 115 has its own means to identify endangerment in a foreign country. Indeed, Congress made a clear effort to extend the language of § 110 to require the inclusion of non-NAAQS-related requirements into SIPs.

III. Exercising § 115 Authority

The implication of a conclusion that Congress intended EPA to regulate non-criteria pollutants under § 115 is that EPA can exercise its § 115 authority relatively quickly. The following discussion explains why the requisite endangerment and reciprocity findings can likely be made, and outlines how a § 115 call for SIP revisions might operate.

A. The endangerment finding

As others have noted,[42] EPA is already equipped to make the international endangerment finding under § 115. The foundational reports by the Intergovernmental Panel on Climate

[42] *See, e.g.*, *The Road Ahead*, *supra* note 1, at 167 n.569 and accompanying text; Martella & Paulson, *supra* note 4, at B-7.

Change (IPCC), which have found that anthropogenic warming of the climate system contributes to "increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level,"[43] can probably constitute the requisite report "from any duly constituted international agency" that informs EPA's reasonable belief that "any air pollutant or pollutants emitted in the United States cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country."[44]

In the only two cases that have ever reached the courts under § 115, both relating to attempts by Canadian provinces and environmental groups to force EPA to act on acid rain under § 115,[45] the D.C. Circuit has regarded as self-evident the determination of whether an organization is a "duly constituted international agency." In both cases, the court noted without further explication that the International Joint Commission, an organization created by the U.S. and Canada in the Boundary Waters Treaty,[46] is "concededly a 'duly constituted international agency' for purposes of section 115(a)."[47] There is no reason that the IPCC, an intergovernmental body established by the United Nations Environment Programme and the World Meteorological Organization, is not similarly a duly constituted international agency. In any event, the Secretary of State can request EPA to act under § 115 if she finds that foreign endangerment exists.

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[43] Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policymakers 2, 5 (2007).
[44] 42 U.S.C. § 7415(a).
[45] *Her Majesty the Queen v. EPA*, 912 F.2d 1525 (D.C. Cir. 1990) (upholding as reasonable EPA's interpretation of § 115 that it was not required to promulgate endangerment and reciprocity findings under the section until it could determine specific sources of the pollutant); *Thomas v. New York*, 802 F.2d 1443 (D.C. Cir. 1986) (dismissed on administrative procedure grounds).
[46] Boundary Waters Treaty, U.S.-Gr. Brit., May 13, 1910, 36 Stat. 2448, Art. III.
[47] *Her Majesty the Queen*, 912 F.2d at 1529; *see also Thomas*, 802 F.2d at 1445 (noting that the endangerment finding was based on a "report issued by the International Joint Commission, concededly a 'duly constituted international agency' for purpose of § 7415(a)").

B. The reciprocity finding

The contours of the reciprocity finding are less self-evident. The legislative history reveals no indication of how reciprocity is to be understood.[48] More revealing is the 1981 determination by Douglas Costle, then EPA Administrator, that the endangerment and reciprocity requirements of § 115 had been satisfied for emissions causing acid rain in Canada. After unsuccessful diplomatic attempts to address such emissions, Canada passed legislation in December 1980 amending the Canadian Clean Air Act in an explicit effort to provide the reciprocity required by § 115.[49] The new legislation authorized the Canadian federal government to adopt emissions standards for sources of pollution that the Environment Minister "has reason to believe . . . may reasonably be expected to constitute a significant danger to the health, safety or welfare of persons in a country other than Canada."[50] For non-federal sources of pollution, the Minister is required to consult with the governing province and provide the province an opportunity to take the appropriate abatement actions; where reasonable efforts by the Minister to procure reduction or elimination of the foreign endangerment by the province are unsuccessful, the federal government is authorized to prescribe an emission standard for the non-federal

[48] *See* John L. Sullivan, *Beyond the Bargaining Table: Canada's Use of Section 115 of the United States Clean Air Act to Prevent Acid Rain,* 16 CORNELL INT'L L.J. 193, 208-09 (1983) (noting that "the indicia of Congressional intent in legislative history is slight and sheds virtually no light on what reciprocity means under section 115"); Caplan, *supra* note 9, at 583 n.287 ("There is no evidence as to how reciprocity was intended to be defined in the Congressional discussions and Conference Report of 1965. Again, no mention of the reciprocity provision was made in 1970 and 1977 when Congress amended the CAA."). Others have also sought with little success to glean meaning from the reciprocity requirement of other statutes. *See* Caplan, *id.* at 583 n.287 (noting that reciprocity in other statutes, such as the 1976 Fishery Conservation and Management Act, "are not helpful in interpreting the reciprocity section of § 115"); Sullivan, at 211-12.

[49] *See* Sullivan, *supra* note 48, at 219 (quoting the Canadian Environmental Minister's statement that "[t]he purpose of the amendments . . . is to provide the United States with essentially the same legislative protection as that offered Canada under section 115 of the United States clean air act.").

[50] An Act to Amend the Clean Air Act, ch. 45, 1980 Can. Gaz. 1159 (Part III) § 21.1(1).

sources.[51] The affected foreign country is afforded "a reasonable opportunity" to make "representations" regarding the proposed emissions limits.[52]

The U.S. State Department announced on December 24, 1980 that the U.S. would determine whether the Canadian legislation met the reciprocity requirement of § 115. Costle's determination was subsequently made in letters dated January 13, 1981 to then Secretary of State Edmund Muskie[53] and Senator George Mitchell.[54] In the letters, Costle identified two distinct considerations in the reciprocity determination: (1) whether the legislation gives the Canadian government authority "to provide essentially the same rights to the U.S." as § 115 provides to Canada, and (2) whether the Canadian government "is exercising or interpreting that authority in a manner that provides essentially the same rights to the U.S."[55]

With respect to the first consideration, Costle determined that the Canadian legislation provides the Government of Canada "ample authority" to give the U.S. "essentially the same rights as Section 115 of the Clean Air Act gives to Canada."[56] Costle identified the substantial similarities between § 115 and the Canadian law: both authorize a federal official to make a finding concerning foreign endangerment caused by domestic emissions and "to prescribe specific emission limits to eliminate, significantly reduce, or prevent the endangerment"; both allow the state or province to take appropriate abatement actions and authorize the federal government to establish emission limitations if the state or province fails to provide an adequate remedy; both also allow the federal government to "provide opportunities for public hearing on

[51] *Id.* §§ 21.1(3), 21.2.
[52] *Id.* § 21.1(2)(b).
[53] Letter from Douglas M. Costle, EPA Administrator, to Edmund S. Muskie, Secretary of State (Jan. 13, 1981), Appendix A of *New York v. Thomas*, 613 F.Supp. 1472, 1486 (1985).
[54] Letter from Douglas M. Costle, EPA Administrator, to George Mitchell, U.S. Senator (Jan. 13, 1981), Appendix B of *New York v. Thomas*, 613 F.Supp. 1472, 1488 (1985).
[55] Letter to Muskie, *supra* note 53, at 1487.
[56] *Id.* at 1487.

any proposed action and participation in the hearing by an affected foreign government."[57] Costle noted that the "principal difference" between the two statutes was the U.S. Clean Air Act's "detailed procedural and substantive requirements applicable to the State plan revision process" as opposed to the "more general requirement in the Canadian legislation for provincial consultation and reasonable efforts to secure action by the provincial government."[58] He concluded, nevertheless, that the provincial consultation requirement "fills the same role" as the SIP revision process, and this procedural difference "does not significantly restrict the ability of the Government of Canada to provide essentially the same rights to the United States."[59]

With respect to the second consideration in the reciprocity determination, Costle noted that the Canadian legislation allowed the Environment Minister "some discretion regarding the scope of the remedy."[60] Whether the Canadian government was interpreting and implementing the law in such a way as to provide "essentially the same rights" as § 115 was therefore necessarily "dynamic" and "influenced by Canadian action now and in the future."[61]

Although Costle's determination was issued in the final days of President Carter's term and the Reagan administration subsequently failed to take action based on the findings,[62] the determination has not been revoked and is instructive in determining the contours of the

[57] *Id.* at 1488.
[58] *Id.*
[59] *Id.*
[60] *Id.*
[61] *Id.* at 1487.
[62] The first § 115 case, *Thomas v. New York*, was an effort to force EPA to issue the § 115 SIP revision call following Costle's determination, but was dismissed on the ground that Costle's findings, issued without notice and comment, could not be the basis for judicial relief. 802 F.2d 1443 (D.C. Cir. 1986). The second § 115 case, *Her Majesty the Queen v. EPA*, followed a petition for EPA rulemaking, which was denied because the D.C. Circuit upheld as reasonable EPA's determination that § 115 required a "unitary proceeding" wherein EPA was not required to promulgate endangerment and reciprocity findings until it was able to determine the specific sources of pollution. 912 F.2d at 1528 (D.C. Cir. 1990).

reciprocity requirement.[63] First, strict reciprocity, that is identical statutory language, is likely not required for § 115 reciprocity. Costle had noted that the Canadian legislation's foreign endangerment "refers to 'significant danger to health, safety or welfare of persons,'" which differs from § 115's reference to the endangerment of "public health or welfare," but assumed that the phrase in the Canadian legislation would be "interpreted to have essentially the same coverage as the Section 115 phrase."[64] Differences in the political systems of different countries, as with the relationship between the federal government and the provinces in Canada and the relationship between the federal government and the states in the U.S., also necessitate different statutory language.

Even if some differences in statutory language are permissible, however, the required degree of similarity is probably higher than "substantive" reciprocity, which would merely focus on whether the foreign country provides for GHG mitigation to the same degree as the United States. For instance, one commentator has suggested that commitments under the UNFCCC to adopt domestic policies to mitigate climate change, which the U.S. has ratified along with 192 other nations, is sufficient to satisfy § 115's reciprocity requirement.[65] Based on the high degree of similarity between the Canadian legislation and the U.S. Clean Air Act, however, this argument for a broad understanding of reciprocity probably cannot be convincingly made. The similarities identified by Costle in his determination, including the authorization to prescribe specific emissions limits to address endangerment in a foreign country and procedural rights for the foreign country to participate in hearings on the proposed emissions limits, are elements that

[63] Pursuant to the District Court's order in *New York v. Thomas*, 613 F.Supp. 1472 (D.D.C. 1985), EPA reassessed Costle's reciprocity finding in 1985, four years after it was initially made, and confirmed on October 22, 1985 that "reciprocity continues to exist between the United States and Canada." *Thomas v. New York*, 802 F.2d at 1446.
[64] Letter to Muskie, *supra* note 53 at 1488.
[65] *The Road Ahead*, *supra* note 1, at 167 n. 569. Indeed, the argument is made here that even the commitment by developing countries merely to "take climate change considerations into account, to the extent feasible," in domestic policies is sufficient to satisfy § 115's reciprocity requirement. This seems highly unlikely.

likely need to exist in another country's legislation to satisfy the reciprocity requirement. That said, the action that many countries have already taken to address climate change and the desire many countries have to see the U.S. act on climate change may make some countries amenable to establishing the necessary reciprocity as Canada did in the acid rain context.

C. Issuing a call for SIP revisions under § 115

Section 115's broadly-worded language that notice to the Governors of the states constitutes a finding under § 7410(a)(2)(H)(ii), "which requires a plan revision with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminate the endangerment,"[66] provides EPA substantial flexibility in issuing a call for SIP revisions. Although EPA does not have the authority to mandate that states adopt particular approaches in their SIPs,[67] EPA successfully established a trading program implemented through the states under the 1998 NO_x SIP call.

The trading program set up under the NO_x SIP call, in which EPA mandated that 20 states and the District of Columbia revise their SIPs to mitigate the interstate transport of ozone under § 110(a)(2)(D)(i)(I), is a useful model for a § 115 SIP call.[68] In that rule, EPA calculated and established a NO_x emissions "budget" for each state, which represented the amount of allowable NO_x emissions remaining after the state prohibited the emissions impermissibly contributing to nonattainment in other states.[69] States had discretion to choose the control

[66] 42 U.S.C. § 7415(b).
[67] *See Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir.), *modified on other grounds*, 116 F.3d 499 (D.C. Cir. 1997). However, where a state does not submit a SIP or where EPA finds a SIP inadequate, EPA may implement a federal implementation plan for that state. 42 U.S.C. § 7410(c).
[68] Although parts of that rule were vacated by the D.C. Circuit, the court upheld the EPA's determination of state NOx budgets that served as the underpinning for the trading program, and the trading program itself was not challenged. *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000).
[69] Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, 63 Fed. Reg. 57,356-01 (Oct. 27, 1998) (codified at 40 C.F.R. pts. 51, 72, 75, 96) [hereinafter "NO_x SIP call"]. In *Michigan*, the D.C. Circuit upheld the NO_x budget

measures necessary to bring their NO_x emissions within the budget, and one such measure was to participate in a regional trading program. EPA included in the SIP call a model NO_x Budget Trading Program rule, including provisions for allocations, monitoring, banking, penalties, and trading protocols, that the affected states could opt into to meet their obligations under the SIP call; states choosing to participate in the trading program had flexibility to modify certain provision of the model rule.[70] In theory, the effective "cap" on emissions through the establishment of state budgets incentivizes states to participate in trading to maximize the cost-effectiveness of emissions reductions, and indeed, all 20 of the affected states and the District of Columbia chose to meet their NO_x SIP call requirements through participation in the trading program.[71]

In the NO_x SIP call, EPA also identified alternative means for states to meet their NO_x budget aside from the trading program, including energy efficiency and renewable energy generation. Specifically, EPA suggested that states could "include[e] a provision within [the] State's NO_x Budget Trading Rule that allocates a portion of [the] State's trading program budget to implementers of energy efficiency and renewable projects that reduce energy-related NO_x emissions," or states could simply "include energy efficiency and renewable projects" as part of their SIPs separate and apart from the trading program.[72]

In the case of a § 115 SIP call, EPA can similarly establish GHG budgets for each state and develop a model budget trading rule that states can choose to adopt.[73] As with the NO_x

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program because it "reasonably establishes reduction levels and leaves the control measure selection decision to the states." *Michigan*, *supra* note 68, at 688.

[70] NO_x Budget Trading Program, 40 C.F.R. pt. 96.

[71] *See* EPA, NO_x Budget Trading Program Information, at http://www.epa.gov/airmarkets/progsregs/nox/sipbasic.html.

[72] NO_x SIP call, *supra* note 69, 63 Fed. Reg. at 57,438.

[73] *See The Road Ahead, supra* note 1, at 80. Although further research would need to be done, the Compact Clause and the Supreme Court's interpretation of its relatively narrow scope likely will not act as a barrier to such state

program, the existence of a cap on emissions should incentivize states to participate in trading as a means to obtain cost-effective emission reductions. Like the NO_x SIP call, the § 115 SIP call might also present alternative means for states to meet their GHG budgets, such as a model energy efficiency rule, a model renewable energy rule, or suggested new source performance standards that might not otherwise be promulgated under § 111. Ultimately, although states will have a choice in how they meet the SIP call requirements, the "teeth" that § 115 gives EPA to establish state GHG budgets, together with the presentation of an array of choices for meeting those budgets, including a trading mechanism, can take the country as a whole a long way in mitigating GHG emissions.

IV. The Advantages of Exercising § 115 Authority

Exercising authority to revise SIPs under § 115 offers multiple benefits. First, unlike § 111 on new source performance standards, which EPA has indicated may be its Clean Air Act authority of choice to implement GHG trading[74] and which suffers from inconclusive legal precedent and practical limitations, § 115 would take advantage of the clear mandate that states have to implement market mechanisms and would offer substantial flexibility for states to regulate upstream or downstream sources of GHGs. Section 115 suffers from legal ambiguity too, but if it can be argued, as this paper argues, that § 115's legislative history allows for it to be implemented, EPA's exercise of authority under this section would essentially hand the responsibility of meeting GHG emissions budgets to the states. And notably, the Clean Air Act

cooperation. *See generally* Note, *The Compact Clause and the Regional Greenhouse Gas Initiative*, 120 HARV. L.R. 1958 (2007).

[74] In its fiscal year 2011 budget, EPA sought $7.5 million to use its existing Clean Air Act authority to issue new source performance standards (NSPS) for GHGs, which may include a cap-and-trade system. *EPA Faces Likely Hurdles in Bid to Use NSPS Authority for GHG Trading* (Inside EPA, Feb. 12, 2010).

has clearly authorized the states to implement and participate in cap-and-trade programs.[75] By contrast, there is some ambiguity as to whether the language of § 111, which requires EPA to establish "standards of performance," permits a cap-and-trade program.[76] Moreover, the definition of "stationary source" in the Act is such that a cap-and-trade program under § 111 could likely regulate only downstream sources, which may be a less effective means to limit GHG emissions than regulation of upstream sources – an option that states would have under a § 115 pathway.[77]

Exercise of EPA's authority under § 115 also offers an advantage over Title VI relating to stratospheric ozone protection, which has been identified as another potential avenue for cap-and-trade implementation. Regulation under Title VI, which was enacted to implement the 1987 Montreal Protocol to phase out ozone-depleting substances, would first require a finding that GHGs "may reasonably be anticipated to affect the stratosphere, especially ozone in the stratosphere, and such effect may reasonably be anticipated to endanger public health or welfare."[78] It is not at all clear that this finding could be made.

Finally, as has already been mentioned, § 115 is preferable to use of EPA's authority to establish NAAQS under § 108 and to regulate through SIPs in this way. Aside from the impracticality of subjecting the entire country to the onerous requirements that accompany nonattainment, EPA's previous attempts to use its authority relating to NAAQS to implement cap-and-trade programs have met with uneven success. As indicated earlier, EPA successfully established a cap-and-trade program through the NO_x SIP call pursuant to § 110(a)(2)(D)'s

[75] 42 U.S.C. § 7410(a)(2)(A) (Each SIP is required to "include enforceable emission limitations and other control measures, means, or techniques (including *economic incentives such as fees, marketable permits, and auctions of emissions rights*), as well as schedules and timetables for compliance, as may be necessary or appropriate . . . .").
[76] *See The Road Ahead*, *supra* note 1, at 86-89. The Clean Air Mercury Rule which established a mercury emissions cap-and-trade program under § 111 was struck down on other grounds, and the legality of the trading system itself under § 111 was not addressed by the courts. *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008).
[77] *The Road Ahead*, *supra* note 1, at 86-89.
[78] Clean Air Act § 615, 42 U.S.C. § 7671n.

mandate that SIPs prevent interstate interference with the attainment or maintenance of NAAQS.[79] On the other hand, the D.C. Circuit struck down EPA's attempt to cap and allow trading of sulfur dioxide and nitrogen oxides under the Clean Air Interstate Rule, reasoning that EPA was not exercising its § 110 duty to "achieve something measurable toward the goal" of prohibiting sources within one state from contributing to nonattainment or interference with maintenance of NAAQS in another state, because trading would allow emissions in some states to increase.[80]

V. Conclusion

Ultimately, although obscure and shadowed by a misplaced assumption that it necessitates the establishment of NAAQS, § 115 offers promise because (1) its authority can be exercised relatively quickly given that the necessary endangerment and reciprocity findings can likely be made in the near term, (2) it stands on strong legal ground insofar as states have clear authority to participate in allowance trading (and would be strongly incentivized to trade through the establishment of a cap), (3) it devolves responsibility to the states, which should give individual states political breathing room in deciding how to comply with the cap, and (4) it offers great flexibility, which should encourage the greatest efficiencies in complying with the cap.

Federal legislation enacting a cap-and-trade program for GHG emissions is no doubt the ideal approach. This paper does not make the argument that determining GHG emissions caps for each state and then permitting states to choose how to meet that cap is by any means the most efficient or effective approach to GHG mitigation. In the absence of a comprehensive federal

[79] *See Michigan v. EPA*, *supra* note 68.
[80] Like the NO_x SIP call, the statutory authority for the CAIR trading program was § 110(a)(2)(D)(i)(I). *North Carolina v. EPA*, 531 F.3d 896, 908 (D.C. Cir. 2008).

scheme, however, and in the face of a political climate that seems increasingly resistant to a comprehensive cap-and-trade regime, this paper seeks to encourage the consideration that EPA has more in its Clean Air Act arsenal than it currently supposes. Section 115 must be rethought.