Friends with Co-Benefits: Defending the EPA’s Consideration of Co-Benefits when Promulgating Clean Air Act Regulations

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**Friends with Co-Benefits: Defending the EPA’s Consideration of Co-Benefits when Promulgating Clean Air Act Regulations**

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**Introduction**

The growing economic and climate crisis has made it difficult to pass successful clean energy and climate regulations.† Despite clean energy having the potential to produce “decades of cheap power,” the high up-front costs provide an economic hurdle for countries to jump

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over. For example, the Environmental Protection Agency (EPA) estimated that its 2015 Clean Power Plan for regulating greenhouse gas emissions (GHG) would annually cost “$5.5 billion by 2020 and $7.3 billion by 2030.”

In the United States, when the EPA promulgates regulations under the Clean Air Act (CAA), “[m]ost statutory provisions require or allow [the EPA to take] some consideration of cost and benefits.” To outweigh the high up-front costs that often hinder environmental progress, the EPA includes various co-benefits when conducting its cost-benefit analyses under the CAA. These co-benefits are “win-win” situations. They refer to “the positive effects that a policy . . . aimed at one objective might have on other objectives.” A general example is a regulation aimed at reducing GHG emissions would also have the co-benefit of decreasing human health risks. A specific example where co-benefits were important to a piece of legislation is when the Obama administration EPA passed the Mercury Air Toxic Standards (MATS) to decrease mercury emissions from coal- and oil-fired electric plants. The EPA attributed most of the regulation’s benefits not to the direct decrease of mercury emissions, but to the co-benefit of decreases in dangerous particulate matter emissions. These simultaneous benefits occur because coal plants emit both mercury and particulate matter (along with other harmful substances). When the plants install control systems to comply with a regulation to limit one substance’s emissions, emissions from other substances will also be caught by the installed technology causing a decrease in emissions of both. Without the consideration of these co-benefits, the cost of complying with the MATS

2. Id.
8. Choi et. al., supra note 6, at 1.
10. Ferrey, supra note 9, at 128; see also Michigan, 576 U.S. at 760.
11. Ferrey, supra note 9, at 122.
was approximately 2,000 times greater than the estimated direct benefits.\textsuperscript{12}

It is important for the EPA to have the ability to look at the big-picture effects of potential regulations so it can ensure that it is drafting efficient and protective policies.\textsuperscript{13} Co-benefits aid the EPA in its responsibility to propose regulations “with the greatest net benefits.”\textsuperscript{14} Ensuring clean air goes beyond the political debate surrounding climate change mitigation, for the pollutants listed under the CAA can have deadly impacts on human health if not regulated properly.\textsuperscript{15}

To fully understand where the importance for EPA co-benefit use comes from, Part I sets the statutory foundation by summarizing the basic structure of the Clean Air Act. Part I then provides a general breakdown of when and how the EPA conducts cost-benefit analyses in the regulatory process. Part II discusses two recent challenges to this practice: one stemming from criticism the EPA received after promulgating a rule with a strong reliance on co-benefits, and one where the EPA itself changed its stance after an administration change on how much weight co-benefits should be given in its analyses. Despite the various criticisms to co-benefits, such as double counting and faulty data methods, perhaps the loudest outcry is that co-benefits give the EPA the ability to regulate pollutants that do not fall under its statutory authority—either in that specific provision or in the Act as a whole. The concern is that the direct benefit acts as the Trojan horse used to justify a regulation where the EPA’s real focus is on achieving the co-benefit.\textsuperscript{16}

The remaining Parts use administrative law principles to argue that the EPA is acting within its authority and expertise when it considers co-benefits in policy decisions. The defense starts with Part III applying the \textit{Chevron} doctrine to find that the EPA has discretion to determine which factors are relevant to consider when devising CAA provisions.\textsuperscript{17} However, with the Supreme Court’s recent hesitancy to apply the

\begin{itemize}
\item \textsuperscript{12} \textit{Id.} at 109.
\item \textsuperscript{13} \textit{See} Michael A. Livermore, \textit{Polluting the EPA’s Long Tradition of Economic Analysis}, 70 \textit{Case W. Rsv. L. Rev.} 1063, 1072 (2020) (“[I]nefficient regulations can result from ignoring indirect effects.”).
\item \textsuperscript{14} \textit{Id.} at 1064.
\item \textsuperscript{15} Ferrey, \textit{supra} note 9, at 121 (“Mercury’s toxic effects on the human nervous system, digestive and immune systems, kidneys, lungs, skin, and eyes, lead to premature death of young children and people, and to adverse impact on the neurological development of the fetus.”).
\item \textsuperscript{17} Ferrey, \textit{supra} note 9, at 133.
\end{itemize}
Chevron doctrine, Part IV provides another defense. It outlines how co-benefits are not precluded under the major questions doctrine, so the plain language and purpose of the CAA controls in giving the EPA co-benefit authority. Part V applies the Administrative Procedure Act to showcase how policy decisions that consider co-benefits withstand the arbitrary and capricious “hard look” review. Lastly, Part VI applies the principle of stare decisis to the EPA’s discretionary interpretation of the CAA to consider costs and benefits.

I. STRUCTURE OF THE CLEAN AIR ACT AND COST-BENEFIT ANALYSES

A. Clean Air Act Basics

The first step to regulate an air pollutant from a stationary source under the CAA is for a pollutant to be listed as either a criteria air pollutant or a hazardous air pollutant (HAP). Criteria air pollutants are pollutants that “endanger public health or welfare.” The designation of a substance as one of these pollutants is based on criteria that the EPA Administrator establishes using the “latest scientific knowledge” to determine what factors and quantities of a substance affect “public health or welfare.” Examples of criteria air pollutants are particulate matter, carbon monoxide, sulfur oxide, and nitrogen dioxide. While some levels of criteria pollutants in the atmosphere are safe, that is not the case for hazardous air pollutants. HAPs are pollutants that the Administrator finds to cause “or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment.” Even in small concentrations, HAPs can cause cancer and other serious health risks. Examples of HAPs are benzene, mercury, and lead compounds.

The Administrator then sets emission standards for each listed pollutant. When setting HAP standards, the Administrator must consider the “(A) . . . adverse effects of such pollutants on public health and the environment; (B) the quantity and location of emissions . . . and; (C) the efficiency of . . . the processes or technologies used.” The

18. 42 U.S.C. § 7408(a) (requiring the EPA to list criteria air pollutants); id. § 7412(b) (requiring the EPA to list hazardous air pollutants).
19. Id. § 7408(a)(1)(A).
20. Id. § 7408(a)(2).
23. Id. § 7412(b)(1).
24. Id. § 7412(e)(2).
standards must reflect the “maximum degree of [emission] reduction . . . that the Administrator, taking into consideration the cost of achieving such . . . reduction, . . . determines is achievable for new or existing sources.”

Because the CAA strongly focuses on regulating criteria air pollutants, its standards are set through the National Ambient Air Quality Standards (NAAQS). NAAQS must be set at a level that is “requisite to protect the public health” with an “adequate margin of safety.” New sources of pollution emissions are subjected to higher standards than existing sources. Standards of performance for new sources must reflect the “best system of emission reduction” that the Administrator determines has been “adequately demonstrated.” In determining what the “best system of emission reduction” is, the Administrator must consider “the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements.”

B. Cost Consideration

In a review of sixty-seven major CAA sections, about half (thirty-four) were found to explicitly permit or require cost consideration, and eight more were found to imply cost consideration. However, other sections of the Act make no mention of cost consideration, or explicitly prohibit it. In the 2001 decision Whitman v. American Trucking Associations, Inc., the Supreme Court ruled that when setting NAAQS under CAA section 109, the EPA cannot consider

25. Id. § 7412(d)(2).
26. Id. § 7409.
28. A new source is “any stationary source, the construction or modification of which is commenced after the publication of regulations.” 42 U.S.C. § 7411(a)(2).
29. Id. § 7411(a)(1).
30. Id.
31. JAMES E. McCARTHY & RICHARD K. LATTANZIO, CONG. RSCH. SERV., R44840, COST AND BENEFIT CONSIDERATIONS IN CLEAN AIR ACT REGULATIONS 3 (2017); see also id. at 4–5 for a full list of the forty-two CAA provisions that mention or imply cost consideration.
implementation costs. The EPA is tasked with identifying the highest concentration of a pollutant that “the public health can tolerate, decrease the concentration to provide an ‘adequate’ margin of safety, and set the standard at that level.” There is no consideration of costs in this initial calculation. While challengers argued that economic concerns are a part of “public health,” the Court pointed out that other sections of the CAA explicitly state that the EPA is required to take cost into consideration. One place in the CAA where cost is explicitly required is section 111, where the Administrator is instructed to set standards for new sources at a level which reflects the “best system of emission reduction” considering the “cost of achieving such reduction.” Therefore, the lack of the word “cost” in section 109 makes the text and Congress’s intent clear.

Thus, due to Congress’s use of “cost” in other sections of the CAA, cost consideration still plays an important role in the EPA’s CAA duties. In addition to section 111, the EPA must also consider costs under section 112, when promulgating HAP standards and regulations. Moreover, in Michigan v. EPA, the Supreme Court held that the EPA acted unreasonably when it failed to consider costs when determining whether it was “appropriate and necessary” to regulate power plant HAP emissions. Even Justice Kagan’s dissenting opinion admitted that “[c]ost is almost always a relevant—and usually, a highly important—factor in regulation. Unless Congress provides otherwise, an agency acts unreasonably in establishing ‘a standard-setting process that ignore[s] economic considerations.’”

34. Whitman, 531 U.S. at 486; see also Lead Indus. Ass’n, Inc. v. EPA, 647 F.2d 1130, 1148 (D.C. Cir. 1980) (“[T]he statute and its legislative history make clear that economic considerations play no part in the promulgation of ambient air quality standards under Section 109.”).
35. Whitman, 531 U.S. at 465.
36. Id.
37. Id. at 466–67.
38. Id. at 467; 42 U.S.C. § 7411(a)(1) (emphasis added).
39. 42 U.S.C. § 7412(d)(2) (“Emissions standards . . . shall require the maximum degree of reduction in emissions of the hazardous air pollutants . . . that the Administrator, taking into consideration the cost . . . determines is achievable . . . .”).
41. Id. at 759.
Additionally, the EPA must comply with executive orders that require cost consideration when promulgating emission standards. Cost-benefit analyses first became a mandatory aspect of regulatory policy development when President Reagan issued Executive Order 12,291 in 1981. Because this Order “encourage[d] regulatory agencies to promulgate more cost-beneficial policies,” President Clinton “did not dismantle the growing stronghold” of cost-benefit analyses when he took office. Rather, President Clinton issued Executive Order 12,866 to build upon President Reagan’s order. Executive Order 12,866 stressed the “welfare-enhancing role” of cost-benefit analyses and “not[ed] the importance of considerations that could not be monetized.” Under the Clinton Order, the EPA is required to conduct regulatory impact analysis that includes a cost-benefit analysis if a proposed rule would be a “significant regulatory action.” A regulation is a “significant regulatory action” if it will have “an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities.” President Obama also reinforced the importance of a cost-benefit analysis in the rulemaking process when he issued Executive Order 13,563 to supplement Executive Order 12,866. In his Order, President Obama added an additional clause directing agencies to “consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.”

43. Steven Ferrey, Mind the Gap: Supreme Court Contraction of Legal Discretion for the Executive Branch, 13 TEX. J. OIL GAS & ENERGY L. 119, 126 (2018).
45. Cecot & Viscusi, supra note 44, at 581–82.
46. Id. at 582; Exec. Order No. 12,866, 3 C.F.R. 638 (1994).
47. Cecot & Viscusi, supra note 44, at 582.
49. Id.
C. Conducting the Cost-Benefit Analyses

When drafting air quality regulations, the EPA constructs economic impact analyses (EIAs). The EPA follows published guidelines to ensure that it complies with drafting requirements, maintains consistent treatment of issues, and implements regulations that “contribute to a safe environment and a healthy economy.” The Guidelines for Preparing Economic Analyses (Guidelines) are developed by “the EPA’s National Center for Environmental Economics (NCEE) in consultation with economists from across the Agency.” The Guidelines draw from and are consistent with the OMB Circular A-4, which is the Office of Management and Budget’s guidance to federal agencies on the regulatory impact analysis required under Executive Order 12,866. The Guidelines are intended to “reflect the most current, peer-reviewed and established practices in the economics profession”; however, the last finalized update to the document was in 2016.

1. Cost Analysis

According to the Guidelines, the correct measure of cost is the social cost, or “the total burden a regulation will impose on the economy.” Social cost includes opportunity costs that will be lost due to the regulation, losses due to reduction in capital investment, and expenditures to decrease pollution, such as equipment, materials, and labor. Both indirect and direct costs are to be considered. The EPA admits in the Guidelines that “indirect costs of a regulation may be


54. Id.


57. The most up-to-date Guidelines can be found at Guidelines for Preparing Economic Impact Analyses (2016), supra note 53.

58. EPA, GUIDELINES FOR PREPARING ECONOMIC ANALYSES, ch. 8, at 1 (2010) [hereinafter GUIDELINES ch. 8].

59. Id. at 2.
considerably greater than the direct costs.”60 Direct costs are incurred by the regulated entities themselves, while indirect costs fall upon consumers, related markets, and other agencies.61 When determining the cost of a regulation, the EPA considers both quantitative and qualitative factors.62 Qualitative factors can cause issues in the cost-determination process, but factors that ultimately cannot be quantified are to be described in the analysis.63

Another issue is determining costs that are incurred over time.64 It is difficult to foresee economic changes that will ultimately determine how an industry and consumers will comply with a potential regulation.65 For example, new technology can cause unforeseen compliance difficulties that result in costs being higher than expected; however, new technology can also improve compliance methods, resulting in lower costs than originally predicted.66

2. Benefit Analysis

In a cost-benefit analysis, benefits are estimated in monetary terms to make comparisons between benefits and costs easier to determine.67 The Guidelines instruct the EPA to carry out an “effect-by-effect” approach by evaluating major effects of a policy separately and then using the sum of these effects to estimate total benefits.68 Benefits are converted into quantitative values by estimating the “willingness to pay (WTP) of all affected individuals” for the benefit.69 WTP is calculated by the dollar value of goods and services at market price the average individual would trade for the benefit.70 Benefits of environmental policies mainly fall within two categories: human health improvements and ecological improvements.71 The biggest human health improvements include “reduced mortality rates, decreased incidence of non-fatal cancers, chronic conditions and other illnesses, and reduced adverse

60. Id. at 8.
61. Id. at 7.
63. GUIDELINES ch. 8, supra note 58, at 12.
64. Id. at 9–10.
66. Id.
68. Id. at 3.
69. Id. at 6.
70. Id. at 7.
71. Id. at 9.
reproductive or developmental effects.” 72 Ecological improvements include climate moderation, maintaining biodiversity, protecting recreational activities and aesthetics, land conservation, increased crop yields, and improved water quality. 73

When determining what human health or ecological factors are impacted by a proposed regulation, “[a]nalysts should . . . think through potential secondary or indirect effects . . . , as these may prove to be important.” 74 These indirect effects are also known as co-benefits, and they are “particularly relevant” to the CAA. 75 Co-benefits are often pollution reductions that are “not explicitly required by a regulation but that will nevertheless result from the technological or operational changes made to comply with the rule.” 76 For example, when the EPA enacted MATS in 2016, a regulatory impact analysis found that a “great majority of the [estimated annual benefits] are attributable to co-benefits.” 77 While MATS was directly aimed at reducing mercury emissions (a HAP), compliance would also indirectly reduce particulate matter emissions (a criteria air pollutant). The EPA estimated that MATS would prevent 4,200–11,000 particulate matter-related deaths. 78

By considering both a regulation’s direct and indirect effects, policymakers obtain a full picture of all the relevant information to “act in the best interest of the public.” 79 This full picture perspective gives co-benefits the ability to challenge the belief that environmental regulations must always be in opposition to the economy. While up-front costs for pollution regulations are often high, the installation of renewable energy sources, for example, can create “green jobs” and increase energy security and independence. 80 Co-benefits also help “align the temporal and scalar difference[s]” between climate policy costs and benefits. 81 It can be difficult to grasp the full extent of value

72. Id. at 8.
73. Id. at 9, 15, 17.
74. Id. at 3.
78. Id.
79. INST. FOR POL’Y INTEGRITY, supra note 76, at 1.
80. Mayrhofer & Gupta, supra note 7, at 24.
81. Id. at 27.
that air quality regulations provide when the implementation costs are immediate and expensive, yet the benefits often are only seen much later in time.82 Using co-benefits in an analysis allows the EPA to bring awareness to benefits that are “local, take effect immediately and are easier to measure and hence more politically feasible.”83 Co-benefits are crucial to cost-benefit analyses when important, yet expensive, environmental issues are at stake; however, they also play a role in achieving smaller, lower priority environmental goals. If an environmental issue is not substantial or immediate enough to be high on the political agenda, there is a possibility the goal can still be achieved as a “side effect” (i.e., co-benefit) of a larger piece of legislation.84

Hypothetically, the EPA could continually add co-benefits in its cost-benefit analyses until the benefits eventually outweigh the costs. So, when does an effect become too far removed from the triggering regulation to be considered a co-benefit? How far down the domino line into the future can policymakers look to justify up-front costs? The answers to these two questions are fully within the discretion of the EPA. However, CAA section 103 prevents the EPA from abusing this discretion by requiring the EPA to collaborate extensively with professionals. Notably, the section establishes a “national research and development program for the prevention and control of air pollution.”85 As part of the program, the Administrator must establish expert-filled “technical advisory committees” and work with other federal agencies and entities in collecting “basic data on chemical, physical, and biological effects of varying air quality.”86 Namely, to assess risks to human health, the Administrator must create an “Interagency Task Force” that includes representatives from agencies such as the “National Institute for Environmental Health Sciences, . . . the National Institute of Standards and Technology, the National Science Foundation, the Surgeon General, and the Department of Energy.”87 With numerous professionals from numerous agencies

82. Id.
83. Id.
84. Id.
86. Id. §§ 7403(a)(4), (b)(6). For example, when conducting environmental health effects research, the Administrator must consult with the Secretary of Health and Human Services on studies, “including epidemiological, clinical, and laboratory and field studies.” Id. § 7403(d)(1)(A). Additionally, the Administrator works with the “Under Secretary of Commerce for Oceans and Atmosphere, the Director of the Fish and Wildlife Service, and the Secretary of Agriculture” to research short-term and long-term effects and trends of ecosystems damage from air pollutants. Id. § 7403(e).
87. Id. § 7403(d)(2)(A).
conducting numerous studies, it is safe to say that, working together, they are capable of accurately determining all the relevant benefits—direct and indirect—of a proposed regulation. Thus, the section 103 requirements for extensive expert collaborations provide safeguards for the proper use of co-benefits.

II. RECENT CHALLENGES TO THE EPA’S USE OF CO-BENEFITS

While environmentalists and most economists argue that considering co-benefits is “common sense,” the practice has been met with its fair share of opposition.88 Two common criticisms are that co-benefits cause agencies to “double count” benefits that are already achieved through other, existing legislation, and that co-benefits are included in analyses too broadly.89 The Obama administration EPA was met with double counting accusations when it adopted the Clean Power Plan in 2015.90 The rule established state guidelines “to reduce [GHG] emissions from existing fossil fuel-fired electric generating units.”91 In addition to decreased GHG emissions, the cost-benefit analysis relied heavily on the co-benefits of decreases in particulate matter and ozone emissions.92 While the Clean Power Plan was later struck down by the Supreme Court in West Virginia v. EPA93 for other reasons outlined in Part IV(A), critics argued that, in its cost-benefit analysis, the EPA disregarded particulate and ozone reductions it had already mandated in other regulations—causing units of pollution that can only be prevented once to justify multiple rules.94 The EPA defended its use of particulate matter and ozone reduction as co-benefits because the “estimated benefits associated with these emission reductions are beyond those achieved by previous EPA rulemakings.”95

The Trump administration EPA addressed the criticism that previous administrations considered co-benefits too broadly by enacting the Benefit-Cost Rule in 2020.96 The rule attempted to minimize the

88. Joselow, supra note 75.
89. Gray, supra note 3, at 32.
91. Id.
92. Id. at 64928–30.
93. 142 S. Ct. 2587 (2022).
94. Gray, supra note 3, at 32.
use of co-benefits by requiring the EPA to separate “economic benefits ‘targeted by the relevant statutory provision’ from other collateral or co-benefits.”97 Then-EPA Administrator Wheeler stated that the benefit focus should be on the regulation’s targeted pollutants—“[c]o-benefits should never be the driver of a regulation.”98 The rule’s justification is found in its title, “Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process.”99 However, Administrator Wheeler acknowledged the rule was also “aimed at preventing future administrations from imposing restrictions on toxic mercury pollution from power plants, as the Obama administration did.”100

The action was met with criticisms of its own. Nonprofits and scientific associations argued that distinguishing between direct benefits within the statutory provision and “other welfare effects” is a “complex, controversial, and ultimately fruitless endeavor.”101 Even if the distinction were clear, the practice would “minimize[] key public health benefits of [a] regulation.”102 Additionally, courts, the EPA Guidelines, and the Office of Management and Budget all emphasized that problems with co-benefits occur when the focus is too narrow rather than too wide.103 President Biden’s EPA responded to these critiques by rescinding the Trump administration’s rule.104 The Biden EPA found that the rule would have “limited EPA’s ability to use the best available science in developing Clean Air Act regulations” and would have been


98. Id.


102. Id. at 623.

103. Livermore, supra note 13, at 1073 & n.48.

104. EPA Rescinds Unnecessary Benefit-Cost Rule, supra note 99.
“inconsistent with economic best practices.” Opponents have yet to challenge the rescission of the Trump administration’s Benefit-Cost Rule.

III. The Chevron Doctrine

In addition to the criticisms regarding how the EPA calculates and considers co-benefits, the agency is afflicted with cries that the practice in general expands the EPA’s delegated authority. Critics argue that co-benefits enable the EPA to indirectly regulate emissions that are not authorized within a specific statutory section. Those who are opposed to this apparent expansion question the legitimacy of the administrative state. At the center of this administrative doubt is the application of the Chevron doctrine—a standard that courts use to determine if an agency has “correctly interpreted the statute under which it operates.” Before further expanding on the Chevron doctrine controversy, it is important to note how the doctrine supports the EPA’s use of co-benefits.

A. Applying the Chevron Doctrine

The Chevron doctrine is a two-part test; however, under United States v. Mead Corp., Courts should first apply a “step zero.” In this precursory step, to determine if the Chevron doctrine even applies to an agency action, courts must establish whether Congress intended to delegate authority to the agency. Congress’s main purpose for the CAA was to delegate authority to the EPA to implement air quality regulations that “promote the public health and welfare.” In order to achieve this with “an adequate margin of safety,” the EPA must be

105. Id.
107. Id.
112. Mead Corp., 533 U.S. at 226–27 (explaining that agency action “qualifies for Chevron deference when it appears that Congress delegated authority to the agency generally to make rules carrying the force of law, and that the agency interpretation claiming deference was promulgated in the exercise of that authority”).
able to consider all impacts—positive, negative, direct, and indirect—caused by its regulations. Moreover, Congress implicitly delegated authority for the EPA to consider co-benefits in multiple sections of the CAA. For example in section 108, the EPA Administrator is to consider “all identifiable effects on public health or welfare which may be expected from the presence of such pollutant” when establishing criteria for air pollutants. When setting NAAQS under section 109, the Administrator is to set the standard at a level that is “requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant.” Congress gave the Administrator authority when setting standards of performance for new stationary sources under section 111 to establish the “best system of emission reduction” which the Administrator determines to be “adequately demonstrated.” The more information on the impacts of a regulation the Administrator considers, the more adequately a “best system of emission reduction” is demonstrated.

Now that it has been established that Congress delegated authority to the EPA, the two-part Chevron doctrine can be applied. The first step is “whether Congress has directly spoken to the precise question at issue.” If Congress has spoken on the specific issue, the analysis ends there and Congress’s word controls. However, “if the statute is silent or ambiguous with respect to the specific issue,” the court moves to the second step. Step two is “whether the agency’s answer is based on a permissible construction of the statute.”

While it was established above that Congress delegated authority to the EPA to promulgate air pollution regulations that promote the public health and welfare, the CAA makes no specific mention of co-benefits. Congress provides various foundational guidelines on how the EPA is to obtain and evaluate data (such as ensuring qualified experts are conducting the analyses), but Congress implicitly left a

114. Id. § 7409(b)(1)
115. Id. § 7408(a)(2) (emphasis added).
116. Id. § 7409(b)(2) (emphasis added).
117. Id. § 7411(a)(1).
119. Chevron, 467 U.S. at 842–43.
120. Id. at 843.
121. Id.
123. See supra notes 85–87 and accompanying text.
gap in the statute to permit the EPA to use its expertise to determine the “best system of emission reduction.”124

Since Congress has not specifically spoken on the issue of co-benefits, the analysis continues to step two—whether the agency’s interpretation is a permissible construction of the statute.125 During this step, Courts are not determining whether the agency’s interpretation is the best interpretation. They are simply determining whether the interpretation is “within a reasonable range of constructions that an ambiguous statutory provision can support.”126 There are many ways to determine whether an agency’s interpretation is within this reasonable range. For starters, the Office of Management and Budget reported to Congress in 2015 that considering co-benefits “has long been required under OMB Circular A-4” and is consistent with standard accounting practices.127 A similar consideration is whether the agency’s interpretation has been consistently applied.128 An interpretation that “conflicts with the agency’s earlier interpretation is ‘entitled to considerably less deference’ than a consistently held agency view.”129

Although the Trump administration attempted to cut back the use of co-benefits in its since-rescinded Benefit-Cost Rule,130 a study found that “co-benefits made up a significant share of the monetized benefits” of major Clean Air Act rules issued from 1997 to 2019.131 Furthermore, the Trump administration view conflicted with four decades of the EPA’s considering co-benefits when promulgating air pollution regulations.132

124. 42 U.S.C. § 7411(a)(1); see Chevron, 467 U.S. at 843.
125. Chevron, 467 U.S. at 843.
129. Id. (quoting Watt v. Alaska, 451 U.S. 259, 273 (1981)).
Another consideration is whether the interpretation aligns with the text of the statute. In AT&T Corp. v. Iowa Utilities Board, the Supreme Court conducted a textual analysis and found that the Federal Communications Commission’s (FCC) interpretation of the Telecommunications Act of 1996 was unreasonable. The FCC misread the statute, confusing where network access was to occur with which network elements were to be accessible. This textual unreasonableness is not the issue with the use of co-benefits. The text of the CAA provides that the EPA is to consider “all identifiable effects on public health or welfare.” It is a reasonable interpretation, and not a misreading, that co-benefits are included in “all identifiable effects.”

Another textual example is in Utility Air Regulatory Group v. EPA, where the Court found that EPA regulations’ setting emission standards for GHGs from new motor vehicles did not also permit the EPA under the CAA to regulate GHGs from stationary sources. To be reasonable, the EPA’s interpretation had to “account for both ‘the specific context in which . . . language is used’ and ‘the broader context of the statute as a whole.’” The Court found that the EPA’s interpretation of its authority to regulate GHGs from stationary sources did not align with the context of the statute as a whole. The interpretation would have led to an “unprecedented expansion of EPA authority that would have [had] a profound effect on virtually every sector of the economy and touch every household in the land.” Again, this type of unreasonableness is not found here. The EPA’s use of co-benefits is not unprecedented. Furthermore, using co-benefits aligns with the broad context of the CAA because they facilitate the EPA’s ability to analyze which regulations “promote the public health and welfare.” Rather than an aggressive regulation that impacts “virtually every sector of the economy and . . . every household,” co-benefits are

134. Id. at 391–92.
135. Id.
136. 42 U.S.C. § 7408(a)(2). Similarly, the Administrator must set NAAQS at a level to protect public welfare from “any known or anticipated adverse effects” associated with the pollutant. § 7409(b)(2) (emphasis added).
138. Id. at 318–21, 325.
139. Id. at 321 (quoting Robinson v. Shell Oil Co., 519 U.S. 337, 341 (1997)).
140. Id. at 321, 328.
141. Id. at 310–11.
142. OFF. OF MGMT. & BUDGET, supra note 127, at 13.
143. See 42 U.S.C. § 7401(b)(1).
simply a tool the EPA uses in its cost-benefit analyses to create the most efficient regulations possible.144

In sum, the EPA’s use of co-benefits is a permissible construction of the CAA because it complies with the Office of Management and Budget’s guidance to Federal agencies on Executive Order 12,866’s requirements (OMB Circular A-4), it has been consistently applied, and it aligns with the text and purpose of the CAA.145 As a result, under the *Chevron* doctrine, the EPA has acted well within its delegated authority in its long-standing practice of considering co-benefits.

**B. The Fall of the Chevron Doctrine**

For almost four decades, *Chevron* has been the central case defining the balance between the interpretive power of agencies and courts.146 However, in recent years courts have been relying less on *Chevron*.147 Conservative judges and lawyers argue that *Chevron* should be “overruled or at least significantly modified.”148 *Chevron* rose to such heights because of its “simple and readily comprehensible formula” to determine whether the agency or the court is the preferred statute interpreter.149 While the simplicity of this formula is attractive, it is also part of its downfall because it is “obtained by compounding two indeterminate standards.”150 The doctrine does not specify a particular degree of certainty when determining clarity and reasonableness through the two steps, giving judges considerable discretion.151 In step one there is no test to discern if Congress set “clear” limits within a statute, and in step two jurisprudence provides little guidance on what “reasonable” means.152 This wide discretion can lead to “result-oriented judicial decisions.”153

Despite recent criticism and the Supreme Court’s applying the *Chevron* doctrine less than it used to, a *Chevron* analysis is still a useful argument in defending the EPA’s co-benefit practice.154 Although not

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147. *Id.* at 485.
149. *Id.* at 257.
150. *Id.* at 259.
151. *Id.* at 258.
152. *Id.*
153. *Id.*
inconceivable, it is unlikely that the Court will completely overrule the doctrine and “start afresh.”\textsuperscript{155} Perhaps a more likely course of action is for the doctrine to be built upon and reformed, for “[a]ny doctrine that came out of nowhere, gained such rapid ascendency, endured for thirty-five years, and was applied by the Court in more than one hundred cases, must have something going for it.”\textsuperscript{156} With the murky view of the doctrine’s fate, the \textit{Chevron} defense for EPA co-benefits is informative, but should not be solely relied on for justification.

IV. Major Questions Doctrine

\textit{A. Creation of the Major Questions Doctrine}

In \textit{West Virginia v. EPA},\textsuperscript{157} the Supreme Court rejected the EPA’s interpretation that CAA section 111 granted it broad authority to limit GHG emissions from power plants in its Clean Power Plan.\textsuperscript{158} In this plan, the Obama EPA interpreted the “best system of emission reduction” in section 111 as authority to set emission standards for existing sources so strict that they could only be achieved by shifting power generation from existing coal-fired power plants to lower-emitting facilities.\textsuperscript{159} The Court, on the other hand, concluded that “best system of emission reduction” means emission reductions that could actually be achieved at existing plants—not reductions that could only be achieved by completely shifting energy generation.\textsuperscript{160} While this case was based on an agency’s controversial statutory interpretation, the opinion made no mention of the \textit{Chevron} doctrine. Rather, the Court relied on the major questions doctrine.\textsuperscript{161} What \textit{West Virginia v. EPA} established as a doctrine in and of itself, the Court had previously used as a mere consideration in its \textit{Chevron} analysis.\textsuperscript{162}

\begin{itemize}
  \item 155. MERRILL, supra note 108, at 261.
  \item 156. Id. at 272.
  \item 157. 142 S. Ct. 2587 (2022).
  \item 158. Id. at 2616.
  \item 159. Id. at 2603.
  \item 160. Id. at 2614–16.
  \item 161. Thomas B. Griffith & Haley N. Proctor, \textit{Deference, Delegation, and Divination: Justice Breyer and the Future of the Major Questions Doctrine}, 132 YALE L.J. 693, 694 (2022). Although the decision was the first to invoke the specific term “major questions doctrine,” the term identifies a body of law that has developed over the past twenty years. Id.
  \item 162. See supra notes 137–41 and accompanying text; MCI Telecomms. Corp. v. Am. Tel. & Tel. Co., 512 U.S. 218, 234 (1994) (invalidating an FCC regulation that interpreted a statutory term in a way that would have radically altered the scheme set out by the Communications Act of 1934); FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 125–26 (2000)
\end{itemize}

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The major questions doctrine relies on the presumption that “Congress does not delegate policy decisions of great economic and political magnitude to agencies.” Where the *Chevron* doctrine instructs courts to treat statutory silence or ambiguity as implicit delegation of authority, the major questions doctrine treats it as a lack of delegation—if Congress intended to delegate matters of such importance, they would have made it explicitly, unquestionably clear. The doctrine’s focus is to ensure that when agencies act to resolve major questions, they are doing so “with clear congressional authorization and do not ‘exploit some gap, ambiguity, or doubtful expression in Congress’s statutes’” to exceed their delegated authority.

**B. What Makes a Question Major?**

The *West Virginia v. EPA* opinion identifies several factors to determine what makes a question major. Chief Justice Roberts's majority opinion identified three possible indicators of a major question: (1) an agency has attempted to exercise broad power “over a substantial portion of the economy,” (2) the agency’s intended power has “not been previously discovered or utilized,” and (3) Congress has “repeatedly declined to enact” explicit authorization for the intended agency action. In his concurrence, Justice Gorsuch highlighted that “the doctrine applies when an agency claims the power to resolve a matter of great ‘political significance’” or “end an ‘earnest and profound debate across the country.’” Justice Gorsuch notes that the triggering factors listed in the opinion are not exclusive, but are “signs the Court has found significant in the past.” While the listed triggers in *West Virginia v. EPA* (invalidating an FDA regulation that would have authorized the FDA to regulate tobacco products under the Federal Food, Drug, and Cosmetic Act).


164. Id. at 695.


169. Id. at 2621.
Friends with Co-Benefits

Virginia v. EPA are useful, the opinion “did little to delineate a set of clear legal criteria that could resolve closer cases.”

C. Do Co-Benefits Resolve a Major Question?

To determine if the major questions doctrine precludes the EPA from considering co-benefits in its cost-benefit analysis, we look to the triggers listed in West Virginia v. EPA. First, the use of co-benefits has the potential to have a strong impact on the economy. For example, the regulatory impact analysis for the EPA’s MATS found that the annual social costs of the rule, approximated by the compliance costs, would be $9.6 billion. To overcome this cost, the agency found that a “great majority” of the rule’s benefits were attributed to particulate matter co-benefits. While this regulation alone would cost the economy over $9 billion, it does not enable the EPA to exercise broad power over a substantial portion of the economy. A tool used to conduct a cost-benefit analysis before enacting regulations is not comparable to the power the EPA exercised with the Clean Power Plan, where a single regulation had the power to force a nationwide shift in the entire energy system.

The EPA’s use of co-benefits is also not a previously undiscovered or unutilized power. The EPA has taken co-benefits into consideration when evaluating air pollution regulations for four decades. This is far from the “unheralded” EPA power the Supreme Court denied in Utility Air Regulatory Group v. EPA, where the EPA’s interpretation would have given it permitting authority over millions of small sources, such as hotels and office buildings that had never before been subject to such requirements.

Additionally, Congress has not “repeatedly declined to enact” explicit co-benefit authorization. In West Virginia v. EPA, the EPA attempted to regulate GHG emissions through “a regulatory program that Congress had conspicuously and repeatedly declined to enact.

170. Adler, supra note 166, at 56.
171. EPA, supra note 77, at ES-1.
172. Id.
173. See West Virginia v. EPA, 142 S. Ct. at 2610.
174. See id. at 2616.
175. See id. at 2610.
178. Id. at 324, 328.
179. West Virginia v. EPA, 142 S. Ct. at 2610.
itself.”

Yet here, Congress has made no explicit refusal to enact legislation authorizing the use of co-benefits.

Finally, co-benefits are not a matter of “great political significance.” While there are criticisms surrounding the use of co-benefits, the controversy does not rise to that level of political significance. In contrast, an example of a matter of “great political significance” is found in National Federation of Independent Businesses v. Department of Labor, where the Court stayed the Department of Labor’s interpretation of the Occupational Safety and Health Act that gave it authority to impose a COVID-19 vaccine mandate covering all employers with at least 100 employees. There is “little doubt” that the COVID-19 vaccine—which sparked a countrywide debate—was a matter of political significance. Thus, merely considering co-benefits during a cost-benefit analysis is not nearly on the same level of political significance as sweeping COVID-19 vaccine requirements.

Considering the major question factors outlined in West Virginia v. EPA, the use of co-benefits does not trigger and is not precluded by the major questions doctrine. The authority over how a cost-benefit analysis is conducted is not the type of “[e]xtraordinary grant[] of regulatory authority” or “radical . . . change” that the major questions doctrine was designed to protect against. Rather it is the exact type of smaller policy decision that is often specifically delegated to agencies for their relevant expertise.

V. Arbitrary and Capricious “Hard Look” Review

As previously stated, the EPA’s consideration of co-benefits in its cost-benefit analyses is within its statutory authority; however, its use is not without restraint. The EPA’s actions must still be analyzed by “hard look” judicial review. This “review provides a critical check against unconstrained agency power while still protecting agency expertise and independence” from judicial overreach. It is rooted in the Administrative Procedure Act—requiring courts to “hold

180. Id.
181. Id. at 2621 (Gorsuch, J., concurring).
182. 142 S. Ct. 661 (2022) (per curiam).
183. Id. at 665.
184. Id.
unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” However, this “hard look” is actually rather narrow. A court cannot substitute its own policy judgment for that of the agency’s. To keep hard look review restrained, reviewing courts generally ask if the agency’s decision is a “clear error of judgment” or “so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” As long as the agency “examine[d] the relevant data” and there’s an explained “rational connection between the facts found and the choice made,” the decision withstands the review.

First, the EPA’s use of co-benefits is not arbitrary or capricious. To determine this, courts evaluate whether the agency “relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem,” or presented an explanation that “runs counter to the evidence.” In United States Sugar Corp. v. EPA, industry actors challenged three regulations promulgated by the EPA under the CAA that set emissions limits on HAP-emitting combustion machinery (boilers, process heaters, and incinerators). These regulations set a standard for hydrogen chloride (HCl) at the maximum achievable control technology (MACT) rather than a more lenient health-based standard. The industry actors

188. Id. § 706(2)(A).
190. Id.
191. Id.
193. Id.
196. 830 F.3d 579 (D.C. Cir. 2016).
198. U.S. Sugar Corp., 830 F.3d at 591.
199. Id. at 623–24.
argued that EPA’s actions were arbitrary and capricious when it chose to enact the stricter standard due to the “co-benefits that limiting HCl emissions might have in lowering emissions of other . . . pollutants.” They argued that these co-benefits were “impermissible factors” and the regulation was essentially a “regulation of other pollutants”; however, the D.C. Circuit Court of Appeals agreed that these were factors Congress intended the EPA to rely on under the CAA. Thus, the EPA actions were aligned with the “purpose of the CAA—to reduce the negative health and environmental effects of HAP emissions.”

The court also found that the plain language of the CAA supports the EPA’s consideration of the co-benefits from eliminating cumulative risks associated with boiler emissions. Additionally, CAA section 112(d)(2) sets more factor limitations than section 112(d)(4), showing that “Congress knew how to provide such limits where it found them necessary.” The court, therefore, found “no basis to conclude that the EPA could not consider . . . co-benefits” and that “[t]he EPA’s decision . . . was not arbitrary and capricious.”

On the contrary, if the EPA did not consider the co-benefits—as the industry wanted—it is more likely the action would have been arbitrary and capricious because the EPA would have been “fail[ing] to consider an important aspect of the problem.” Finally, the EPA’s explanation for the decision to strengthen the HCl standard was based on its own data and additional data directly from stakeholders and the regulated community.

Given these arguments, the use of co-benefits is also in accordance with the law and not an abuse of discretion. Obtaining all of the information on a proposed regulation’s impacts is not “implausible” or a “clear error of judgment.” Although there are criticisms regarding

200. Id. at 625.
201. Id. at 625–26.
202. Id. at 625.
203. Id.
204. Id. (quoting 42 U.S.C. § 7412(d)(4)).
205. Id. at 626.
206. Id. at 626–27.
208. U.S. Sugar Corp., 830 F.3d at 624–25.
how co-benefits are calculated, these can be “ascribed to a difference in view or the product of agency expertise.” Even when the Trump administration enacted the Benefit-Cost Rule in 2020, the administration did not entirely ban the practice of considering co-benefits; it only changed how they were considered and the weight they were given.

Finally, the EPA uses co-benefits to ensure that it is evaluating all the relevant data on a regulation’s impact. Ignoring indirect impacts is ignoring relevant data. As long as the EPA explains in the proposed rule the connection between its decision and the data it obtained, it should be quite obvious to courts that the EPA’s taking the extra step to consider co-benefits is in and of itself taking a “hard look” at its policy decision.

VI. Stare Decisis and Judicial Support of Co-Benefits

One of the defining features of the American legal system is that courts will follow relevant precedent. This emphasized respect for precedent is paired with the requirement that the Supreme Court Justices “balance the benefits of adhering to precedent against the harm that would result from following a mistaken decision.” However, without a “special justification,” the Court applies a presumption against overruling precedent—a presumption that is “strongest for statutory precedents and weakest for constitutional precedents.”

Scholars have argued that this strong stare decisis effect should be applied to statutory interpretation methods to bring more consistency and predictability to the process. Even more so, they further propose that courts should give “doctrines of statutory interpretation deriving from statutes [even] stronger stare decisis effect than doctrines of substantive law deriving from statutes.” The lower courts should also “strictly adhere to higher-court decisions regarding questions of statutory interpretation.”

The Supreme Court has not spoken directly on the EPA’s use of co-benefits, but “the D.C. Circuit, the most important court of appeals

211. Motor Vehicle Mfrs. Ass’n, 463 U.S. at 43.
212. See supra notes 96–105 and accompanying text.
214. Id.
216. See id. at 1867.
217. Id. at 1868–69.
218. Id. at 1869.
for federal environmental regulation, has held that the EPA must consider indirect effects in its rulemakings.”

Although there have been more court cases regarding indirect costs, courts are beginning to also address indirect benefits and “no court has said there is any reason to treat them differently.” The labels “cost” and “benefit” serve as shorthand for negative and positive effects—“neither possesses any inherent quality warranting different weight or analytical treatment from the other.”

For example, in American Trucking Associations, Inc. v. U.S. EPA, the court remanded the EPA’s revision to the NAAQS for ozone and particulate matter because it failed to consider the “potential indirect health costs from strengthening the regulatory standards.” When the EPA argued that certain secondary effects should be disregarded, the court replied that it “seems bizarre that a statute intended to improve human health would . . . lock the agency into looking at only one half of a substance’s health effects.” Similarly, the D.C. Circuit struck down a National Highway Traffic Administration regulation because it failed to consider the indirect costs of increasing fuel efficiency standards for cars. The indirect costs were increased safety risks because smaller, more fuel-efficient cars are “less safe” in crashes. Without calculating these indirect costs, the agency did not satisfy the standard for reasoned decision-making.

In the Fifth Circuit, the EPA’s attempt to ban asbestos-based brakes under the Toxic Substances Control Act was struck down because the EPA failed to consider the potential indirect safety harm caused by substitute non-asbestos brakes. Given this precedent, courts should regard agencies’

220. Id. at 1435.
221. Id. at 1362.
223. Castle & Revesz, supra note 16, at 1361; Am. Trucking Ass’ns, 175 F.3d at 1034, 1036–37, 1040; Michael A. Livermore & Richard L. Revesz, Rethinking Health-Based Environmental Standards, 89 N.Y.U. L. Rev. 1184, 1250 (2014) (“In a portion of its American Trucking opinion not reviewed by the Supreme Court, the D.C. Circuit stated that at least certain types of secondary effects must be considered by the agency when setting the NAAQS.”).
224. Am. Trucking Ass’ns, 175 F.3d at 1052.
226. See id. at 326–27.
227. Id. at 327.
co-benefit considerations as having the same level of importance and necessity as indirect cost considerations, for the two have been described as each other’s “mirror image.”

With the controversy surrounding co-benefits becoming more prevalent in CAA regulations, courts are only recently discussing co-benefits specifically in opinions. In anticipation of the *West Virginia v. EPA* opinion, scholars were hopeful the Court would have the opportunity to address how to treat co-benefits when an important strategy in the Trump administration’s plan to repeal the Obama administration’s Clean Power Plan relied on co-benefit consideration. Unfortunately, as discussed in Part IV, the opinion focused mainly on whether the case presented a major question and did not address co-benefits.

The Court also previously avoided the discussion of co-benefits in *Michigan v. EPA*. Despite the EPA’s MATS regulation relying heavily on co-benefits for justification, the Court was more concerned with the EPA’s disregard of the regulation’s costs. The Court stated that “[e]ven if the Agency could have considered ancillary benefits when deciding whether regulation is appropriate and necessary—a point we need not address—it plainly did not do so here.” The Court focused on how it was unreasonable for the EPA to deem cost irrelevant when regulating HAPs from power plants, leaving open the question on how to address co-benefits. However, the Court emphasized that agencies must engage in “reasoned decision-making,” which requires the agency to consider all relevant factors. When “a highly significant proportion of . . . reductions come from the co-benefits,” it is hard to see how they would not be considered a relevant factor.

Finally, the most direct discussion of co-benefits within the courts is found in *United States Sugar Corp. v. EPA*. As previously

230. *Id.* at 1350–51.
231. Adler, *supra* note 166, at 38 (“By skimping on statutory analysis and front-loading consideration of whether a case presents a major question, Chief Justice Roberts’s opinion failed to provide much guidance for lower courts.”).
235. *Id.* at 759.
238. 830 F.3d 579, 625 (D.C. Cir. 2016).
discussed, in 2016 the D.C. Circuit supported the EPA’s co-benefit use when it upheld the Agency’s standard for HCl emissions. The standard relied on the co-benefits of “reducing hazardous air pollutants from boilers, process heaters, and incinerators.”239 These co-benefits were not “a regulation of other pollutants,” for it was the EPA “choosing not to ignore the purpose of the CAA.”240 With this precedent, it is clear that the principle of stare decisis supports the EPA’s use of co-benefits.

**Conclusion**

The Clean Air Act is specifically designed to ensure that the EPA uses its qualified, scientific expertise to make decisions on what air quality regulations are needed to protect the public.241 In these situations where an agency makes decisions based on “its area of special expertise, at the frontiers of science,” the reviewing court should “generally be at its most deferential.”242 How courts ultimately respond to challenges regarding the extent of reliance the EPA’s experts give to co-benefits “will have far reaching consequences for climate change regulations, as well as for public health rules more generally.”243 Unreasonable limits to co-benefit consideration could be paralyzing to the CAA’s effectiveness, as co-benefits “are particularly relevant to the [Act].”244 Particulate matter co-benefits account for a substantial portion of the total benefits from air quality regulations.245 For example, it is highly likely that MATS would not have been justified without consideration of the indirect health benefits caused by decreased particulate matter emissions.246 Without co-benefits, the cost of MATS compliance would have been approximately 2,000 times greater than the estimated direct benefits.247 By ignoring co-benefits, the EPA would have been ignoring the prevention of an estimated 4,200–11,000 particulate matter-related deaths.248 It is simply inefficient and


240. *U.S. Sugar Corp.*, 830 F.3d at 625.


244. Joselow, *supra* note 75.


247. *Id.*

negligent policymaking to ignore these indirect effects.\textsuperscript{249} However, by considering co-benefits, the EPA can prioritize regulations that “produce the greatest net benefits for society” while also fulfilling the CAA’s purpose to enact air quality regulations that “promote the public health and welfare.”\textsuperscript{250}

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\textsuperscript{249} Livermore, \textit{supra} note 13, at 1072.
\textsuperscript{250} Cecot & Viscusi, \textit{supra} note 44, at 576; 42 U.S.C. § 7401(b)(1).
\end{flushleft}

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