How to Deal with Hornets: The Administrative Procedure Act and the Social Cost of Carbon

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ABSTRACT: This Note explores the extent to which the 2013 revision to the social cost of carbon ("SCC")—a figure used in the cost-benefit analysis of federal rules involving carbon dioxide emissions—conforms to the Administrative Procedure Act's ("APA") notice and comment process. This Note analyzes two precedents the 2013 SCC revision process set: (1) an agency will not re-notice a proposed rule when it substitutes an old SCC with a revised SCC in the final rule; and (2) the interagency working group that calculates the SCC will not submit revised SCCs for independent notice and comment. This Note argues that these precedents, although likely permitted under present judicial interpretations of the APA, contribute to an uncertain regulatory environment for industries subject to carbon emissions regulation. This Note recommends that the Office of Information and Regulatory Affairs, a member of the interagency working group as well as the hub of executive oversight of the rulemaking process, should communicate more clearly and transparently about the SCC revision process, using the Federal Reserve System's "forward guidance" communications strategy as a model.

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I. INTRODUCTION

In April 2007, the U.S. Supreme Court ruled in *Massachusetts v. EPA* that greenhouse gases, like carbon dioxide ("CO_2"), fall within the Clean Air Act's definition of "air pollutant."[1] The decision empowered the Environmental Protection Agency ("EPA") to directly regulate CO_2 from a variety of new sources.[2] In May of the same year, the *Center for Biological Diversity v. National Highway Traffic Safety Administration* decision in the U.S. Court of Appeals for the Ninth Circuit paved the way for a new type of indirect CO_2 regulation: the social cost of carbon ("SCC").[3] First released in 2010, the SCC establishes a set of uniform values for federal agencies to use in the cost-benefit analysis of proposed regulations addressing CO_2 emissions.[4]

A somewhat obscure rule used the SCC for the first time,[5] but it has since figured in more "economically significant rules"[6] with decisive effect. For example, a recent Department of Transportation ("DOT") vehicle fuel efficiency standard, which used the SCC in its cost-benefit analysis, will cost manufacturers $350 billion over a 40-year period.[7] The DOT estimated the

1. Massachusetts v. EPA, 549 U.S. 497, 532 (2007) (quoting 42 U.S.C. § 7602(g) (2006)).

2. President Barack Obama, Remarks by the President on Climate Change at Georgetown University (June 25, 2013), *available at* http://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change (discussing *Massachusetts v. EPA*, the EPA's subsequent finding that greenhouse gases are harmful, and the regulatory mandate flowing therefrom).

3. *See infra* notes 54–62 and accompanying text (discussing the *Biological Diversity* opinion).

4. INTERAGENCY WORKING GRP. ON SOC. COST OF CARBON, U.S. GOV'T, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12,866, at 2 (2010) [hereinafter 2010 SCC] ("The [SCC] is an estimate of the monetized damages associated with an incremental increase in carbon emissions in a given year.").

5. A Department of Energy ("DOE") rule regarding "alternating current single-speed induction motor[s]" with output of 0.25 to 3 or more horsepower ("Hp") first used the SCC. Energy Conservation Program: Energy Conservation Standards for Small Electric Motors, 74 Fed. Reg. 61,410, 61,412 tbls.I.1–I.3, 61,413, 61,415 (Nov. 24, 2009) (to be codified at 10 C.F.R. pt. 431). By way of reference, kitchen blenders typically have a peak output of 2 to 3 Hp. April Jones, *Understanding Blender Specifications*, COOKING FOR ENGINEERS (Jan. 4, 2011, 2:27 AM), http://www.cookingforengineers.com/article/287/Understanding-Blender-Specifications/print.

6. "Economically significant" is a term of art derived from an executive order defining "[s]ignificant regulatory action" as an action "likely to . . . [h]ave an annual effect on the economy of $100 million or more." Exec. Order No. 12,866, 58 Fed. Reg. 51,735, 51,738 (Sept. 30, 1993). *See* OFF. OF INFO. & REG. AFF., http://www.reginfo.gov/public/jsp/Utilities/faq.jsp (last visited Nov. 10, 2014).

7. Mark Drajem, *Obama Quietly Raises 'Carbon Price' as Costs to Climate Increase*, BLOOMBERG (June 12, 2013, 2:52 PM), http://www.bloomberg.com/news/2013-06-12/tougher-regulations-seen-from-obama-change-in-carbon-cost.html.

conventional[8] benefits of reduced carbon emissions at $278 billion,[9] meaning that the costs of the new standard ($350 billion) would outweigh its benefits ($278 billion) by more than $50 billion. However, when the DOT factored in the SCC, which valued the carbon emissions reduction that the new standard would cause at $177 billion,[10] the new standard's benefits ($455 billion) exceeded the costs ($350 billion) by more than $100 billion. Without factoring in the SCC, the standard was too costly; factoring in the SCC tipped the cost-benefit scales in favor of the new standard.[11]

The White House's Office of Information and Regulatory Affairs ("OIRA")[12] has said that "there is no doubt that the [SCC] will" continue to appear in "economically significant rules."[13] For example, in June 2013, President Obama directed the EPA to "complete new pollution standards for both new and existing power plants."[14] A year later, the EPA published proposed emissions guidelines and estimated that the net benefits of the guidelines will be $26–46 billion in 2020.[15] Climate benefits calculated using the SCC accounted for 40–65% of the projected net benefits.[16] Many other directives in the June 2013 "President's Climate Action Plan"[17] will also lead

8. Conventional benefits of carbon emissions regulations typically aggregate the value of benefits to individuals and to the nation. *See* Energy Conservation Program: Energy Conservation Standards for Standby Mode and Off Mode for Microwave Ovens, 78 Fed. Reg. 36,316, 36,317–20 (June 17, 2013) (to be codified at 10 C.F.R. pts. 429–30). A common benefit of this type is reduced operating costs. *See id.* at 36,319. In the context of vehicle fuel efficiency standards, a more fuel-efficient car requires less frequent refueling, which saves individual consumers money on fuel. Additionally, increased fuel efficiency leads to less air pollution, which reduces health problems associated with breathing polluted air, which in turn saves individuals money on healthcare. *See* Dan Utech, *A Step Toward Cleaner Air and Healthier Communities*, THE WHITE HOUSE BLOG (June 11, 2014, 5:14 PM), http://www.whitehouse.gov/blog/2014/06/11/step-toward-cleaner-air-and-healthier-communities. On the other hand, the SCC measures environmental benefits of carbon emissions regulations. *See* Energy Conservation Program: Energy Conservation Standards for Standby Mode and Off Mode for Microwave Ovens, 78 Fed. Reg. at 36,317–18.

9. Drajem, *supra* note 7.

10. *Id.*

11. *Id.*

12. Pronounced "oh-eye-ruh." *See infra* notes 48–53 and accompanying text (discussing OIRA's role in the rulemaking process).

13. *Examining the Obama Administration's Social Cost of Carbon Estimates: Hearing Before the Subcomm. on Energy Policy, Health Care & Entitlements of the Comm. on Oversight & Gov't Reform*, 113th Cong. 21 (2013) [hereinafter *Hearing*] (statement of Howard Shelanski, Administrator, Office of Information and Regulatory Affairs).

14. Obama, *supra* note 2.

15. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,830, 34,840 tbl.1 (June 18, 2014) (to be codified at 40 C.F.R. pt. 60).

16. *Id.* The EPA calculated the climate benefits to be $17–18 billion (all dollar amounts are in 2011 dollars). *Id.* Since states will implement the rule individually, the EPA's cost-benefit analysis for the regulations is "illustrative." *Id.* at 34,839.

17. EXEC. OFFICE OF THE PRESIDENT, THE PRESIDENT'S CLIMATE ACTION PLAN 5 (2013) (calling for "a wide variety of executive actions" focusing on "three pillars": (1) to "cut carbon

to rules using the SCC in their cost-benefit analyses. Since proposed rules involving CO_2 will likely appear more frequently and have greater economic impact, it follows that policymakers and affected industries will take a keener interest in the SCC revision process, which one member of Congress has called a "black box."[18]

This Note discusses the SCC revision process within the context of the Administrative Procedure Act's ("APA") notice and comment process for federal agency rulemaking.[19] In particular, this Note examines two precedents the first SCC revision process set: (1) an agency will not re-notice a proposed rule when it substitutes an old SCC with a revised SCC in the final rule; and (2) the interagency working group that determines the SCC estimates will not submit revised estimates for independent notice and comment. This Note concludes that despite congressional objections to the 2013 SCC revision process, it did not violate the APA.

Still, the SCC revision process's compliance with the APA does not necessarily address congressional concerns about the "black box" character of the SCC.[20] Given the role the SCC will play in President Obama's climate policy, OIRA has an incentive to manage the SCC in a way that "creat[es] public confidence . . . enables stakeholders to better participate," and ensures the integrity of SCC-based rules.[21] Consequently, this Note recommends that OIRA proactively address congressional concerns about the SCC by communicating more clearly and transparently about the SCC revision process.

This Note proposes the Federal Reserve System's ("Fed") forward guidance communication strategy as a model for OIRA to follow. The Fed's forward guidance strategy involves issuing regular statements regarding the federal funds rate, a benchmark interest rate that influences most other interest rates in the U.S. economy.[22] These statements help households, businesses, and investors form more accurate expectations about important

pollution"; (2) to "prepare for the impacts of a changing climate"; (3) and to "forge a truly global solution to" climate change).

18. *Hearing*, *supra* note 13, at 23, 27–28 (statement of Rep. James Lankford, Chairman, H. Subcomm. on Energy Policy, Health Care and Entitlements).

19. *See infra* notes 34–40 and accompanying text (describing the notice and comment process).

20. Though Congress could take action to place the SCC within the APA's reach, that scenario seems unlikely. *See infra* notes 183–85 (discussing political obstacles to congressional action).

21. *See* Letter from James Lankford & Jackie Speier, U.S. Representatives, to Howard Shelanski, Adm'r, Office of Info. & Regulatory Affairs 1–2 (Aug. 20, 2013), *available at* http://oversight.house.gov/wp-content/uploads/2013/08/2013-08-20-Lankford-Speier-to-Shelanski-re-SCC-hearing.pdf.

22. *Federal Open Market Committee*, BOARD GOVERNORS FED. RES. SYS., http://www.federalreserve.gov/monetarypolicy/fomc.htm (last visited Nov. 10, 2014).

future financial conditions.[23] Four characteristics contribute to an effective forward guidance strategy: low conditionality, high credibility, high transparency, and high forecast accuracy.[24] OIRA should adopt all four characteristics in its approach to the SCC.

Part II of this Note provides further information about the SCC and the federal funds rate. Part III analyzes whether the 2013 SCC revision precedents conform to the APA, and Part IV recommends strategies for OIRA to begin developing the four characteristics that contribute to effective forward guidance.

II. BACKGROUND: A TALE OF TWO NUMBERS

Although the SCC and the federal funds rate serve different purposes, they share many characteristics. Both the SCC and the federal funds rate have a large impact on significant economic activity.[25] Each figure reflects an analysis of complex data that changes over time,[26] necessitating regular updates.[27] Although the federal interagency working group that sets the SCC[28] and the Fed strive for objective accuracy, the processes involved in setting the SCC and the federal funds rate allow for various interpretations[29] and setting each figure reflects public policy decisions.[30]

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23. *How Does Forward Guidance About the Federal Reserve's Target for the Federal Funds Rate Support the Economic Recovery?*, BOARD GOVERNORS FED. RES. SYS., http://www.federalreserve.gov/faqs/money_19277.htm (last visited Nov. 10, 2014).

24. MARTIN HOCHSTEIN, ALLIANZ GLOBAL INVESTORS, FORWARD GUIDANCE: COMPARISON OF G-4 CENTRAL BANKS' LATEST COMMUNICATION POLICY INNOVATIONS 5 (2013), *available at* http://www.allianzgi.com/en/Market-Insights/Documents/Forward-Guidance-Sept2013.pdf.

25. "[V]ery economically significant rules" use the SCC, while changes in the federal funds rate "can set off a chain of events" affecting interest rates throughout the economy. *Compare Hearing*, *supra* note 13, at 21, *with* BD. OF GOVERNORS OF THE FED. RESERVE SYS., THE FEDERAL RESERVE SYSTEM: PURPOSES & FUNCTIONS 16 (9th ed. 2005).

26. Calculating the SCC involves analyzing actual and forecasted data about CO_2 emissions, their impact on the climate, and the economic effects of that climatological impact, while calculating the federal funds rate involves analyzing actual and forecasted data about economic conditions, trends, and risks. *Compare* 2010 SCC, *supra* note 4, at 2, *with Federal Open Market Committee*, *supra* note 22.

27. The SCC is "updated over time to reflect increasing knowledge of the science and economics of climate impacts," while the federal funds rate is reviewed eight times each year. *Compare* 2010 SCC, *supra* note 4, at 1, *with Federal Open Market Committee*, *supra* note 22.

28. *See infra* note 64 and accompanying text (discussing the origins and members of the interagency working group).

29. The interagency working group aims for a "defensible" rather than a definitive SCC, while those who determine the federal funds rate often disagree among themselves. *Compare* 2010 SCC, *supra* note 4, at 1, 3, *with* Michael W. McCracken, *Disagreement at the FOMC: The Dissenting Votes Are Just Part of the Story*, REGIONAL ECONOMIST, Oct. 2010, at 10, 12.

30. Setting the SCC involves "serious questions of science, economics, and ethics," while setting the federal funds rate often involves tradeoffs between job growth and inflation. *Compare* 2010 SCC, *supra* note 4, at 2, *with* Simon Constable, *In Translation: Fed Doves and Hawks*, WALL ST. J. (May 5, 2013, 6:33 PM), http://online.wsj.com/news/articles/SB10001424127887323309604578429281779707410.

A. THE SCC

This Subpart situates the SCC within the federal rulemaking landscape. First, this Subpart summarizes the roles of each branch of government in rulemaking. Next, it describes the circumstances surrounding the development of the 2010 SCC. This Subpart concludes with a discussion of the revised SCC released in 2013, and explores the congressional response to the revision process.

1. Legislative, Judicial, and Executive Roles in Rulemaking

The APA serves as the foundation of federal rulemaking.[31] It defines quite broadly what a rule is[32] and governs an executive agency's "process for formulating, amending, or repealing a rule."[33] The act provides several methods by which agencies can make rules, but the informal "notice and comment" process is the most common.[34] In the notice and comment process, agencies publish proposed rules along with descriptions of the subjects and issues involved in the *Federal Register*.[35] After "noticing" a rule, an agency "must provide interested persons with a meaningful opportunity to comment on the proposed rule" for a certain period of time.[36] While the act obliges agencies to then consider the "relevant matter presented" to them during the comment period, the act does not necessarily oblige agencies to amend the rule in response to received comments.[37] To finalize a rule, agencies once

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31. MAEVE P. CAREY, CONG. RESEARCH SERV., RL32240, THE FEDERAL RULEMAKING PROCESS: AN OVERVIEW 5 (2013) ("The most long-standing and broadly applicable federal rulemaking requirements are in the Administrative Procedure Act . . . .").

32. The APA defines a rule as:

> "[T]he whole or a part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy or describing the organization, procedure, or practice requirements of an agency and includes the approval or prescription for the future of rates, wages, corporate or financial structures or reorganizations thereof, prices, facilities, appliances, services or allowances therefor or of valuations, costs, or accounting, or practices bearing on any of the foregoing . . . ."

5 U.S.C. § 551(4) (2012).

33. *Id.* § 551(5).

34. VANESSA K. BURROWS & TODD GARVEY, CONG. RESEARCH SERV., R41546, A BRIEF OVERVIEW OF RULEMAKING AND JUDICIAL REVIEW 1–2 (2011); CAREY, *supra* note 31, at 5. In addition to the informal notice and comment method of rulemaking, agencies may engage in "formal, hybrid, direct final, [or] negotiated rulemaking" processes. BURROWS & GARVEY, *supra*, at 1.

35. 5 U.S.C. § 553(b)–(e).

36. BURROWS & GARVEY, *supra* note 34, at 2; *see* 5 U.S.C. § 553(c). There is no statutory minimum or maximum length of the comment period. BURROWS & GARVEY, *supra* note 34, at 2. Instead courts "focus[] on whether the agency provided an 'adequate' opportunity to comment," which involves a case-by-case inquiry. *Id. But cf. id.* at 2 n.12 (citing some statutes and executive orders that do require or suggest minimum comment periods).

37. *See* 5 U.S.C. § 553(c).

again publish the rule in the *Federal Register*, this time with a "concise general statement of [the] basis and purpose" of the final rule.[38] Agencies do not typically re-notice a rule before it becomes final; the promulgating agency must re-notice a rule only when the differences between the proposed rule and final rule are such "that the original notice did not adequately frame the subjects for discussion."[39] This multi-step procedure serves an "essential purpose" in rulemaking by "reintroduc[ing] public participation and fairness to affected parties after governmental authority has been delegated to unrepresentative agencies."[40]

The APA also creates a judicial role in rulemaking by providing that individuals "suffering legal wrong because of agency action" have a right to seek judicial review of the action.[41] The APA empowers a reviewing court to "set aside agency action" under a variety of circumstances, including if the court finds the agency action "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[42] Although this statutory language may appear to grant courts broad discretion, the Supreme Court has taken a deferential stance toward the rulemaking process. The Court has held that the APA "established the maximum procedural requirements" for agency rulemaking, and reviewing courts are not free to add "their own notions of proper procedures upon agencies entrusted with substantive functions by Congress."[43] Courts can add procedural requirements to rulemaking only in the presence of constitutional imperatives or "extremely compelling circumstances."[44] The Supreme Court has held that "rule[s] address[ing] complex or technical factual issues or [i]ssues of [g]reat [p]ublic [i]mport" are not inherently compelling circumstances.[45]

In addition to Congress's instructions regarding rulemaking, the White House, beginning with President Nixon and continuing through President Obama, has imposed guidelines on the rulemaking process.[46] While the APA

38. *Id.*

39. Conn. Light & Power Co. v. Nuclear Regulatory Comm'n, 673 F.2d 525, 533 (D.C. Cir. 1982).

40. Batterton v. Marshall, 648 F.2d 694, 703 (D.C. Cir. 1980).

41. 5 U.S.C. § 702.

42. *Id.* § 706(2)(A).

43. Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc., 435 U.S. 519, 524–25 (1978).

44. *Id.* at 543.

45. *Id.* at 545 (internal quotation marks omitted).

46. CAREY, *supra* note 31, at 25–32 (giving a history of executive orders regarding federal rulemaking process); U.S. GEN. ACCOUNTING OFFICE, GAO-03-929, RULEMAKING: OMB'S ROLE IN REVIEWS OF AGENCIES' DRAFT RULES AND THE TRANSPARENCY OF THOSE REVIEWS 19–25 (2003) (same). (Prior to 2004, the Government Accountability Office was known as the General Accounting Office. In this Note the acronym "GAO" refers to the organization both before and after the name change.) President Nixon instituted White House oversight through an informal Office of Management and Budget ("OMB") program; each president since has used executive orders. *Id.*

focuses on preserving public input in rulemaking, White House review generally focuses on achieving coordination and efficiency among rulemaking agencies.[47] OIRA, housed within the White House Office of Management and Budget ("OMB"),[48] reviews many proposed and final rules before their publication in the *Federal Register*.[49] Executive Order 12,866, from the Clinton era, is "[b]y far the most important" of the White House's guidelines.[50] Among other modifications to the then-existing OIRA mission, Executive Order 12,866 announced a "Regulatory Philosophy" requiring agencies to "assess all costs and benefits of available regulatory alternatives, including the alternative of *not* regulating."[51] This philosophy is the lens through which agencies, including OIRA, review proposed rules: a proposed rule becomes final only when the benefits justify the costs.[52] The executive order defined costs and benefits "to include both quantifiable measures . . . and qualitative measures . . . that are difficult to quantify, but nevertheless essential to consider."[53]

2. Origin of the SCC

This Subpart discusses federal agencies' attempts to quantify the qualitative benefits of reduced CO_2 emissions. In May 2007, the Ninth Circuit heard oral arguments in *Center for Biological Diversity v. National Highway Traffic*

47. Exec. Order No. 12,291, 46 Fed. Reg. 13,193, 13,193 (Feb. 17, 1981) (stating five goals of White House review: "to [1] reduce the burdens of existing and future regulations, [2] increase agency accountability for regulatory actions, [3] provide for presidential oversight of the regulatory process, [4] minimize duplication and conflict of regulations, and [5] insure well-reasoned regulations").

48. *About OIRA*, OFF. OF MGMT. & BUDGET, http://www.whitehouse.gov/omb/inforeg_administrator (last visited Nov. 10, 2014). Though OIRA has a prominent role in the rulemaking process, how OIRA performs that role has not always been clear. At times OIRA has positioned itself as a counselor to agencies in their rulemaking efforts, while at other times OIRA has acted as a gatekeeper "to protect people from poorly designed rules." U.S. GEN. ACCOUNTING OFFICE, *supra* note 46, at 40 (quoting John D. Graham, then-administrator of OIRA). The GAO, in response to congressional prompting, has conducted at least two investigations involving the opacity of OIRA's role in the rulemaking process. *See generally* U.S. GEN. ACCOUNTING OFFICE, GAO/GGD-98-31, REGULATORY REFORM: CHANGES MADE TO AGENCIES' RULES ARE NOT ALWAYS CLEARLY DOCUMENTED (1998); U.S. GEN. ACCOUNTING OFFICE, GAO-03-929, *supra* note 46. Among the 2003 report's principle findings was that, while OIRA had made some improvements since 1998, "OIRA's [r]eview [p]rocess [i]s [s]till [n]ot [w]ell [d]ocumented." U.S. GEN. ACCOUNTING OFFICE, GAO 03-929, *supra* note 46, at 13. Investigators reported that "[o]ne rulemaking agency official described the review process to us as a 'black box' into which agencies submit rules that later come out intact, changed, withdrawn, or returned." *Id.* at 29.

49. CAREY, *supra* note 31, at 25. OIRA reviews the proposed and final rules of federal agencies "other than independent regulatory agencies." *Id.* In addition, Executive Order 12,866 limited the scope of OIRA's review to "significant regulatory action." Exec. Order No. 12,866, 58 Fed. Reg. 51,735, 51,738 (Sept. 30, 1993); *see supra* note 6 and accompanying text.

50. CAREY, *supra* note 31, at 25.

51. Exec. Order No. 12,866, 58 Fed. Reg. at 51,735 (emphasis added).

52. *See id.* at 51,735–36.

53. *Id.* at 51,735.

Safety Administration.[54] The plaintiff, an environmental advocacy organization, challenged a rule regarding fuel economy standards.[55] The National Highway Traffic Safety Administration ("NHTSA") had set the standards using a cost-benefit analysis.[56] The plaintiff argued that the government failed to account for the benefits of reduced carbon emissions that would result from increased fuel efficiency, which in turn resulted in a defective cost-benefit analysis. In other words, the failure to account for the value of reduced carbon emissions led to an overstatement of the costs of higher fuel economy standards.[57] The NHTSA conceded that it had not included the benefits of reduced carbon emissions, but it argued that the estimated costs and benefits associated with reducing the emissions were "too uncertain" and varied too widely to require inclusion.[58]

The NHTSA's defense did not persuade the court, which ordered the NHTSA to reconsider the rule without "put[ting] a thumb on the scale by undervaluing the benefits and overvaluing the costs of more stringent standards."[59] The court found the NHTSA's action arbitrary and capricious for "its failure to monetize the value of carbon emissions"[60] when it conceded that "a range of values" existed.[61] The court reasoned that "the value of carbon emissions reduction is certainly not zero. . . . NHTSA insisted at argument that it placed no value on carbon emissions reduction rather than zero value. We fail to see the difference."[62]

As a result of *Biological Diversity*, federal agencies began to monetize the value of CO_2 emissions in their cost-benefit analyses. The efforts to monetize the CO_2 emissions, however, illustrated the variability that had caused the NHTSA to avoid including such values.[63] Consequently, in 2009, the OMB convened an interagency working group[64] to establish the social cost of

54. Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1172 (9th Cir. 2008).

55. *Id.* at 1180. The fuel standard is formally known as the corporate average fuel economy ("CAFE") standard. *Id.* at 1181.

56. *Id.* at 1186.

57. *Id.* at 1188.

58. *Id.* at 1192.

59. *Id.* at 1198.

60. *Id.* at 1181.

61. *Id.* at 1200.

62. *Id.*

63. Post-*Biological Diversity*, the DOE valued CO_2 with a range ($0–20 per ton), the DOT estimated the value of CO_2 at $2 per ton domestically and $33 per ton globally, and the EPA used values of $40 per ton and $68 per ton. Jonathan S. Masur & Eric A. Posner, *Climate Regulation and the Limits of Cost-Benefit Analysis*, 99 CALIF. L. REV. 1557, 1560–61 (2011).

64. The members of the initial interagency working group included the EPA, the Departments of Agriculture, Commerce, Energy, Transportation, and Treasury, and a number of White House entities: the Council of Economic Advisers, the Council on Environmental Quality, the National Economic Council, the Office of Energy and Climate Change, the OMB, and the Office of Science and Technology Policy. 2010 SCC, *supra* note 4, at 2–3.

carbon: a uniform value to "ensure that agencies were using the best available information" in their cost-benefit analyses.[65]

Calculating the SCC involves economics to a greater extent than it involves climate science.[66] To arrive at the SCC, the working group selected five reference scenarios and modeled each scenario in three different economic models.[67] Each modeled scenario[68] yielded a distribution of projected SCCs for each five-year period between 2010 and 2050, which the working group then averaged to arrive at an SCC value for each five-year period.[69] Finally, the interagency working group discounted[70] the average for each period at a different rate (2.5%, 3%, and 5%) to establish a range of three SCC values for a given period.[71] The working group employed a range of discount rates to reflect the uncertainty in the estimation process.[72] The working group also included a fourth value in the range to represent the average SCC values in the 95th percentile of the initial model results.[73] This value "represent[s] higher-than-expected impacts" of carbon emissions that

65. *Hearing*, *supra* note 13, at 5 (statement of Howard Shelanski, Administrator, Office of Information and Regulatory Affairs).

66. *See* PETER LILLEY, GLOBAL WARMING POLICY FOUND., WHAT IS WRONG WITH STERN?: THE FAILINGS OF THE STERN REVIEW OF THE ECONOMICS OF CLIMATE CHANGE 5–6 (2012).

67. 2010 SCC, *supra* note 4, at 5, 15. The three integrated assessment models are: DICE, FUND, and PAGE. *Id.* at 5. Professional economists had previously developed these models independently—of the U.S. government and of each other—and they update the models periodically. FUND - CLIMATE FRAMEWORK FOR UNCERTAINTY, NEGOTIATION & DISTRIBUTION, http://www.fund-model.org (last visited Nov. 10, 2014); *Chris Hope*, UNIV. CAMBRIDGE, http://www.jbs.cam.ac.uk/faculty-research/faculty-a-z/chris-hope/ (last visited Nov. 10, 2014); William D. Nordhaus, *RICE and DICE Models of Economics of Climate Change*, YALE UNIV., http://www.econ.yale.edu/~nordhaus/homepage/dicemodels.htm (last visited Nov. 10, 2014).

68. Five scenarios multiplied by three models equals 15 modeled scenarios.

69. 2010 SCC, *supra* note 4, at 1.

70. Discounting "transforms gains and losses occurring in different time periods to a common unit of measurement" facilitating comparison of present costs to future benefits and vice versa. OFFICE OF MGMT. & BUDGET, CIRCULAR A-94, GUIDELINES AND DISCOUNT RATES FOR BENEFIT-COST ANALYSIS OF FEDERAL PROGRAMS 4 (1992), *available at* http://www.whitehouse.gov/sites/default/files/omb/assets/a94/a094.pdf. For example, assume "you have been promised that in 50 years you will receive $1 billion." U.S. ENVTL. PROT. AGENCY, FACT SHEET: SOCIAL COST OF CARBON 1–2 (2013), *available at* http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf. The present value of that $1 billion would be: $372 million at a 2% discount rate, $228 million at a 3% discount rate, and $87 million at a 5% discount rate. *See id.* As the distance between the present and the future point grows, so too does the effect of discounting. *Id.* at 2. For example, "[t]he [present] value of $1 billion in 100 years would be": $138 million at a 2% discount rate, $52 million at a 3% discount rate, and $8 million at a 5% discount rate. *Id.*

71. 2010 SCC, *supra* note 4, at 1; *see also infra* Part VI, tbl.1. Discounting using a range of rates is not unheard of in federal cost-benefit analyses. The OMB guidelines for cost-benefit analyses advise agencies to perform "base-case" analyses using a 7% discount rate and to perform additional analyses with other discount rates as "the specific economic characteristics of the program under analysis" may warrant. *See* OFFICE OF MGMT. & BUDGET, *supra* note 70, at 9.

72. 2010 SCC, *supra* note 4, at 1.

73. *Id.*

could occur, but are statistically less likely.[74] In other words, it represents the SCC should a catastrophic event occur and accounts for a worst-case scenario.

To arrive at the SCC the group explored the scientific literature and considered public comment, but it did not subject the SCC to APA notice and comment.[75] Instead, the interagency working group published its final work product on the OIRA webpage under the heading "Social Cost of Carbon for Regulatory Impact Analysis."[76] At the time of the release, the interagency working group committed to review the SCC "within two years or at such time as substantially updated [economic and climate change] models become available."[77]

3. The Revised SCC and Subsequent Congressional Action

Early responses to the 2010 SCC focused on the assumptions behind the scenarios the interagency working group modeled to arrive at an SCC.[78] Despite a pair of workshops to address the concerns,[79] commentators continued to describe the working group's modeling assumptions as "a series of choices and value judgments" hidden from policymakers and stakeholders.[80] Thus, when the working group "[q]uietly"[81] published a revised SCC in May 2013,[82] critics erupted. One climate economist observed, "[t]his is a very strange way to make policy about something this important. . . . The Obama [A]dministration hasn't always leveled with us about what is happening behind closed doors."[83] Some observers found the increase in the

74. *Id.*

75. *See id.*

76. *See OIRA—For Agencies*, OFF. OF MGMT. & BUDGET, http://www.whitehouse.gov/omb/inforeg_regpol_agency_review (last visited Nov. 10, 2014).

77. 2010 SCC, *supra* note 4, at 3.

78. *See* Masur & Posner, *supra* note 63, at 1581 (expressing concerns about the accuracy of the working group's assumptions regarding "economic growth and technological development").

79. In November 2010 and January 2011, two interagency working group members—the DOE and the EPA—jointly hosted workshops to discuss the "ongoing work of the U.S. government to improve regulatory assessment and policy analysis related to climate change." ICF INT'L, EXECUTIVE SUMMARY: IMPROVING THE ASSESSMENT AND VALUATION OF CLIMATE CHANGE IMPACTS FOR POLICY AND REGULATORY ANALYSIS 1 (2011).

80. RUTH GREENSPAN BELL & DIANNE CALLAN, ENVTL. LAW INST. & WORLD RES. INST., MORE THAN MEETS THE EYE: THE SOCIAL COST OF CARBON IN U.S. CLIMATE POLICY, IN PLAIN ENGLISH 11 (2011).

81. Drajem, *supra* note 7.

82. The revised SCC debuted in the DOE's Energy Conservation Program: Energy Conservation Standards for Standby Mode and Off Mode for Microwave Ovens, 78 Fed. Reg. 36,316, 36,318 (June 17, 2013) (to be codified at 10 C.F.R. pts. 429–30).

83. Drajem, *supra* note 7 (quoting economist Frank Ackerman) (internal quotation marks omitted). Ackerman "has directed policy reports for clients ranging from Greenpeace to the European Parliament[,] . . . is a founder and member of the steering committee of Economics for Equity and Environment . . . , and a member scholar of the Center for Progressive Reform." *Frank Ackerman*, GLOBAL DEV. & ENV'T INST. AT TUFTS UNIV., http://www.ase.tufts.edu/gdae/about_us/cv/ackerman_cv.html (last visited Nov. 10, 2014).

2013 SCC particularly galling.[84] Depending on the forecasted year and discount rate, the 2013 SCC increased 30–120% compared to the 2010 SCC.[85]

The release of the revised SCC triggered a flurry of congressional activity focusing on the absence of APA notice and comment. Members of the House of Representatives and the Senate proposed legislation blocking agency use of the SCC without express congressional approval or until APA notice and comment occurred.[86] Six senators joined the ranking member[87] of the Senate Committee on Environment and Public Works in a letter to the head of each agency that participated in the SCC revision process. The letter expressed "concerns about the lack of openness and transparency" and requested responses to several questions of the type that would likely arise in a notice and comment process.[88] Additionally, the House Committee on Oversight

84. Robert P. Murphy, *White House Revises Dubious 'Social Cost of Carbon'*, INST. ENERGY RES. (June 6, 2013), http://www.instituteforenergyresearch.org/analysis/white-house-revises-dubious-social-cost-of-carbon/. Murphy is an economist at the Institute for Energy Research, an organization that "maintains that freely-functioning energy markets provide the most efficient and effective solutions to today's global energy and environmental challenges." *About Us*, INST. ENERGY RES., http://www.instituteforenergyresearch.org/about/ (last visited Nov. 10, 2014); *see Robert P. Murphy*, INST. ENERGY RES., http://instituteforenergyresearch.org/about/people/robert-murphy (last visited Nov. 10, 2014).

85. *See infra* Part VI, tbl.1.

86. Members of the House of Representatives introduced at least three bills, and one bill appeared in the Senate. The proposed legislation generally prohibited federal agencies from using the SCC in cost-benefit analyses until: (1) the SCC had undergone notice and comment; or (2) Congress had explicitly authorized the use of the SCC. *See* Energy Savings and Industrial Competitiveness Act of 2013, S. 1392, 113th Cong. § 101(d) (2013); Energy Savings and Industrial Competitiveness Act of 2013, S. 761, 113th Cong. §§ 101(d), 402(2) (as introduced, Apr. 18, 2013); Taking Hold of Regulations to Increase Vital Employment in Energy Act, H.R. 3042, 113th Cong. § 2(a) (2013); Cost-Benefit and Regulatory Transparency Enhancement Act of 2013, H.R. 2593, 113th Cong. § 2(c) (2013); Energy Consumers Relief Act of 2013, H.R. 1582, 113th Cong. § 3(1) (as introduced, Apr. 16, 2013); *see also* 159 CONG. REC. S6382 (daily ed. Sept. 11, 2013) (SA 1854); *Barrasso Amendment Would Prevent Use of Flawed Estimates for Social Cost of Carbon*, AM. CHEMISTRY COUNCIL (Sept. 13, 2013), http://blog.americanchemistry.com/2013/09/barrasso-amendment-would-prevent-use-of-flawed-estimates-for-social-cost-of-carbon/.

87. The ranking member of a congressional committee or subcommittee is a counterpart to a committee or subcommittee chairperson; "[t]he most senior (though not necessarily the longest-serving) member of the minority party on a committee (or subcommittee)." *Glossary*, CONGRESS.GOV, http://beta.congress.gov/help/legislative-glossary/#r (click "ranking member" link) (last visited Nov. 10, 2014).

88. Letter from David Vitter, Ranking Member, Env't & Pub. Works et al., to Robert Perciasepe, Acting Adm'r, U.S. Envtl. Prot. Agency et al. 2 (June 18, 2013), *available at* http://www.epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=d3e6f19b-2238-4082-8dfo-a7a72ed07f65). Questions included:

> What documents guided the [revision] process? Were these documents peer reviewed? Given the importance of the estimate, did you consider releasing it for public comment? . . .
>
> . . . .
>
> How and why were the discount rates chosen? . . .

and Government Reform, Subcommittee on Energy Policy, Health Care, and Entitlements held a hearing examining the SCC.[89]

OIRA's administrator argued that legally the APA did not apply to the SCC revision process and that for policy reasons the APA should not apply. First, the administrator noted that the APA's notice and comment requirement only applies to "rules" as defined in the Act.[90] OIRA maintained that the SCC is not a "rule," but rather an "ingredient" to rules and thus exempt from the APA's requirements.[91] Second, OIRA argued that requiring the SCC to undergo independent notice and comment (i.e., as a discrete "rule," rather than as a component of another rule undergoing notice and comment) would make the SCC less responsive to the latest scientific research and therefore less accurate.[92] As it stands, although the SCC has not undergone independent notice and comment, interested parties have the opportunity to comment on the SCC each time an agency uses it in a cost-benefit analysis of a proposed rule.[93] Given the ever-evolving understanding of the science and economics behind the effects of CO_2 emissions,[94] OIRA argued in favor of this notice and comment on a rule-by-rule basis. According to OIRA, "the opportunity to comment on every rule" helps prevent the SCC from becoming "locked in" at a value too high or too low.[95] Imposing an independent notice and comment process on the SCC would interfere with

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> . . . .
>
> To what extent did the process and its participants consider and incorporate the concept of carbon leakage? . . .
>
> . . . .
>
> [H]ow did the interagency group account for benefits associated with activities that result in carbon dioxide emissions?

Id. at 2–3.

89. *See generally Hearing*, *supra* note 13. The head of OIRA, administrator Howard Shelanski, was the lone witness to testify. *Id.* at 4 (statement of Rep. James Lankford, Chairman, H. Subcomm. on Energy Policy, Health Care, and Entitlements). At the time of this hearing, Shelanski had been in his position less than one month and had not been otherwise involved with the interagency working group's efforts. *See id.* at 10 (statement of Rep. James Lankford, Chairman, H. Subcomm. on Energy Policy, Health Care, and Entitlements); *see also* Press Release, Georgetown Univ. Law Ctr., Professor Howard Shelanski Confirmed as Administrator, Office of Information and Regulatory Affairs (June 28, 2013), *available at* http://www.law.georgetown.edu/news/press-releases/professor-howard-shelanski-confirmed-as-administrator-office-of-information-and-regulatory-affairs.cfm.

90. *Hearing*, *supra* note 13, at 12 (statement of Howard Shelanski, Administrator, OIRA).

91. *Id.*

92. *Id.* at 19.

93. *Id.*

94. The interagency working group characterizes its work as suffering from "uncertainty, speculation, and lack of information," having "limitations" of "exceptional significance," being "difficult" because "[t]here is currently a limited amount of research linking climate impacts to economic damages," and "approximate, provisional, and highly speculative." 2010 SCC, *supra* note 4, at 2, 4, 5, 11.

95. *Hearing*, *supra* note 13, at 19.

interested parties' ability to bring the most reliable science to the attention of regulators as soon as it becomes available.[96] Considering the billions of dollars at stake in carbon emissions regulation,[97] OIRA concluded that accuracy is the paramount consideration.[98] Accordingly, it concluded that it best serves public policy interests to allow interested parties to comment on the SCC each time it appears in a rule rather than in discrete notice and comment processes at intermittent intervals.[99]

The committee members participating in the hearing offered rebuttals to each of OIRA's defenses. They argued that the SCC is a "rule" within the APA's meaning, the SCC revision process should be more transparent, and the administrative inefficiencies of notice and comment on a rule-by-rule basis (rather than at more regular intervals) outweigh its benefits. First, responding to OIRA's assertion that the APA does not require the SCC to undergo independent notice and comment, the ranking member of the subcommittee countered, "We are all about transparency, so why wouldn't this have been, even though it is not a rule, subject to input from the general public . . . ?"[100]

Second, in response to OIRA's presentation of the advantages of rule-by-rule notice and comment on the SCC, the subcommittee chairman compared the rule-by-rule strategy to addressing a hornet infestation on a hornet-by-hornet basis rather than dealing with the nest.[101] In the same way that addressing dozens of hornets individually requires more time and energy than concentrating on the nest, the rule-by-rule approach (as opposed to periodic, discrete notice and comment processes) increases the regulatory burden on parties subject to carbon emissions rules.[102] Regulated parties have an incentive to monitor all proposed rules (regardless of whether the rule actually affects them) and to sponsor their own research on the subject, which could create protracted battles of experts.[103] The ranking member of the subcommittee echoed the chairman's remarks. While conceding the

96. *Id.*

97. *See supra* notes 7–11 and accompanying text (discussing a rule imposing costs of $350 billion). Consider also another industry with significant exposure to SCC-based rules: the energy generation industry, where businesses' expectations about future SCC-based efficiency or emissions regulations will influence billion dollar decisions. *See* Rebecca Smith & Cameron McWhirter, *Mississippi Plant Shows the Cost of 'Clean Coal'*, WALL ST. J. (Oct. 13, 2013, 7:23 PM), http://online.wsj.com/news/articles/SB10001424052702304795804579099220332096960 (reporting on the progress of a new coal-fired plant that has already cost $4.7 billion).

98. *Hearing*, *supra* note 13, at 22–23 (arguing that it would be irresponsible for those in government "simply to cover [their] eyes" to "the most up-to-date science and economics").

99. *Id.* at 19.

100. *Id.* at 14 (statement of Rep. Jackie Speier, Ranking Member, H. Subcomm. on Energy, Policy, Health Care, and Entitlements).

101. *Id.* at 19 (statement of Rep. James Lankford, Chairman, H. Subcomm. on Energy, Policy, Health Care, and Entitlements) ("It is the difference between . . . trying to kill each hornet one at a time or actually going to the hornet's nest.").

102. *Id.*

103. *Id.* at 23–24.

theoretical soundness of the rule-by-rule approach, she argued that the government must balance being "total[] purists" about the SCC with "creat[ing] some certainty for the business community" subject to SCC-based regulations.[104]

B. THE FEDERAL FUNDS RATE

In contrast to the criticism OIRA and the interagency working group have received regarding lack of transparency in the SCC revision process, the Fed has avoided similar criticism in its handling of the federal funds rate. This Note argues that although the SCC and the federal funds rate operate in different contexts, their shared characteristics[105] allow the interagency working group to effectively borrow communications processes and strategies from the Fed. This Subpart introduces the Federal Reserve System and the federal funds rate, explains how the Fed communicates changes in the federal funds rate, and discusses economists' and bankers' views on the effectiveness of the Fed's present communications strategy: forward guidance.

1. The Federal Reserve System

The Fed is the central bank of the United States and conducts monetary policy[106] in pursuit of "maximum employment, stable prices, and moderate long-term interest rates," among other responsibilities.[107] One of the Fed's important monetary policy tools is setting the federal funds rate, an interest rate at which banks lend their Federal Reserve balances to one another.[108]

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104. *Id.* at 23 (statement of Rep. Jackie Speier, Ranking Member, H. Subcomm. on Energy, Policy, Health Care and Entitlements). Business leaders likely cheered these statements. The U.S. Chamber of Commerce describes regulatory certainty as an important feature of a well-functioning marketplace. *Regulatory Climate Index 2014: Section I*, U.S. CHAMBER COM. FOUND., http://www.uschamberfoundation.org/regulatory-climate-index-2014-section-i/ (last visited Nov. 10, 2014).

105. *See supra* notes 25–30 and accompanying text (describing similarities between the SCC and the federal funds rate).

106. "The term 'monetary policy' refers to what the Federal Reserve . . . does to influence the amount of money and credit in the U.S. economy." *Monetary Policy Basics*, FED. RES. EDUC., http://www.federalreserveeducation.org/about-the-fed/structure-and-functions/monetary-policy/ (last visited Nov. 10, 2014).

107. BD. OF GOVERNORS OF THE FED. RESERVE SYS., *supra* note 25, at 1. The Fed's additional duties include "supervising and regulating banking institutions[,] . . . maintaining the stability of the financial system and . . . providing financial services to depository institutions." *Id.*

108. *Id.* at 3. Banks (and other depository institutions) operating in the United States are required to maintain accounts at Federal Reserve banks against which they "make and receive payments on behalf of their customers or themselves." *Id.* at 27. Through decisions about conditions, such as the minimum balances banks must maintain in these accounts, the Fed creates and influences a market for banks to lend and borrow "federal funds" to maintain balance requirements. *Id.* at 27, 30–32. Nevertheless, each time a bank lends federal funds to another bank "[t]he rate that the borrowing institution pays to the lending institution is determined between the two banks." *Effective Federal Funds Rate*, FED. RES. BANK ST. LOUIS, http://research.stlouisfed.org/fred2/series/FEDFUNDS (click "Notes" tab) (last visited Nov. 10, 2014); *see also What is the Fed: Monetary Policy,* FED. RES. BANK S.F., http://www.frbsf.org/education/teacher-

The Fed influences the federal funds rate through, for example, actions that increase or decrease the minimum Federal Reserve balances banks must keep, which alter the conditions under which banks lend each other those balances.[109] Although bank-to-bank loans involving federal funds typically occur on an overnight basis, changes in the federal funds rate or expectations about the future rate "can set off a chain of events" affecting interest rates, stock prices, and exchange rates throughout the economy.[110] In the early 1990s, economists made the "crucial insight" that in addition to several well-understood factors, spending decisions in the U.S. economy also depend on expectations about the federal funds rate.[111]

2. Fed Communication: From "Never Explain" to "Forward Guidance"

At eight regularly scheduled meetings each year, the Fed leadership discusses conditions, trends, and risks in the economy, forecasts future economic conditions, and adjusts monetary policy accordingly.[112] Each postmeeting press release includes a forward guidance statement that explains when the Fed expects to adjust the federal funds rate again.[113]

Such transparency is a recent development. For many years the Fed followed a "never explain, never excuse" communications strategy.[114] Instead of using formal announcements, the Fed "communicated" through the predictability of its actions, responding "in a systematic way to economic conditions" and "fairly reliably follow[ing] a simple rule based on inflation

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resources/what-is-the-fed/monetary-policy (last visited Nov. 10, 2014) (explaining how the Fed sets monetary policy). Thus, properly speaking, the Fed sets a target federal funds rate, rather than actually setting the federal funds rate. *Id.*

109. BD. OF GOVERNORS OF THE FED. RESERVE SYS., *supra* note 25, at 3. Technically, a unit of the Fed, the Federal Open Market Committee, formally acts to influence the federal funds rate. *Id.*

110. *Id.* at 16, 30. Changes in the federal funds rate send such ripples in financial markets because the federal funds rate is a "basis for setting interest rates on financial securities" and provides "[t]he market foundation for both current and expected interest rates." *Fed Challenge Brief: The Fed Funds Rate*, FED. RES. BANK RICHMOND, http://www.richmondfed.org/education/for_teachers/academic_competitions/college_fed_challenge/participants_resources/pdf/fcbrief_fedfunds.pdf (last visited Nov. 10, 2014).

111. Janet L. Yellen, Vice Chair, Bd. of Governors of the Fed. Reserve Sys., Communication in Monetary Policy: Remarks at the Society of American Business Editors and Writers 50th Anniversary Conference 6 (Apr. 4, 2013), *available at* http://www.federalreserve.gov/newsevents/speech/yellen20130404a.pdf. On February 3, 2014, Yellen became Chair of the Federal Reserve Board of Governors. *Janet L. Yellen*, BOARD OF GOVERNORS FED. RES. SYS., http://www.federalreserve.gov/aboutthefed/bios/board/yellen.htm (last visited Nov. 10, 2014).

112. Yellen, *supra* note 111, at 3–4.

113. *See How Does Forward Guidance About the Federal Reserve's Target for the Federal Funds Rate Support the Economic Recovery?*, *supra* note 23.

114. Yellen, *supra* note 111, at 2. "Never explain, never excuse" is a motto attributed to an early 20th century Bank of England governor and popular among central bankers for many years. *Id.* According to Yellen, "that approach was still firmly in place at the Federal Reserve when" she joined the Fed in 1977. *Id.*

and output."[115] It was not until the early 2000s, when "faced with a stubbornly weak recovery from the 2001 recession," that the Fed first began to formally and publically announce its "intentions and expectations" for the federal funds rate.[116]

In the aftermath of the 2008 financial crisis, the Fed announced its intent to reduce "the federal funds rate for an extended period."[117] As the scale of the crisis grew and the pace of recovery lagged, the Fed continued to keep the federal funds rate low but became increasingly explicit in setting expectations. It substituted "for a considerable period" first with "an extended period," and then with actual dates like "mid-2013" and "mid-2015."[118] The Fed has since gone so far as to state specific economic conditions that must likely exist before it will consider raising interest rates again.[119]

3. Views on the Effectiveness of Forward Guidance

In August 2012, Ben Bernanke, then-Chairman of the Federal Reserve Board of Governors, asserted that forward guidance has served as an effective tool in the Fed's efforts to promote economic recovery.[120] Forward guidance has become "fashionable" elsewhere; the Bank of England, the European Central Bank, and the Bank of Japan also employ forward guidance regarding their monetary policies.[121]

Still, some members of the Fed and private sector parties remain skeptical about the effectiveness of forward guidance.[122] For example, Allianz Global

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115. *Id.* at 7 ("In practice, the Federal Reserve's approach was 'never explain, but behave predictably.'"). Only relatively recently, in 1994, did the Fed begin issuing any kind of public post-meeting announcements. *Id.* at 5.

116. *Id.* at 8. Following a 2003 meeting, the Committee declared that it would not only seek to keep the federal funds rate low but that it expected to do so "for a considerable period." *Id.* (internal quotation marks omitted).

117. *Id.* at 11 (internal quotation marks omitted).

118. *Id.* (internal quotation marks omitted).

119. *How Does Forward Guidance About the Federal Reserve's Target for the Federal Funds Rate Support the Economic Recovery?*, *supra* note 23.

120. Ben S. Bernanke, Chairman, Bd. of Governors of the Fed. Reserve Sys., Monetary Policy Since the Onset of the Crisis: Remarks at the Federal Reserve Bank of Kansas City Economic Symposium 10–11 (Aug. 31, 2012), *available at* http://www.federalreserve.gov/newsevents/speech/bernanke20120831a.pdf. Bernanke based his conclusion on how well aligned investors, private forecasters, policy expectations, and Fed expectations had become as a result of forward guidance. *Id.* at 10.

121. HOCHSTEIN, *supra* note 24, at 6–7; *Forward Guidance More than Passing Fashion for Central Banks*, FOX BUS. (Jul. 11, 2013), http://www.foxbusiness.com/economy/2013/07/11/forward-guidance-more-than-passing-fashion-for-central-banks/ (quoting an analyst: "Forward guidance seems to be the new black among central bankers"); Alen Mattich, *The Fashion for Forward Guidance*, WALL ST. J. (Aug. 2, 2013, 4:45 AM), http://blogs.wsj.com/moneybeat/2013/08/02/the-fashion-for-forward-guidance ("Let no one say that central bankers are immune to fashion. The latest is forward guidance.").

122. *See* Charles I. Plosser, President & CEO, Fed. Reserve Bank of Phila., Forward Guidance: Presented to the Stanford Institute for Economic Policy Research's (SIEPR) Annual Meeting 7

Investors[123] has given forward guidance a mixed assessment. It recently found that the strategy has helped the Fed control short-term rate conditions, but the Fed has not controlled long-term rate conditions as precisely.[124] The Allianz report concluded that the success of forward guidance strategies depends on factors such as low conditionality, high credibility, high transparency, and high forecast accuracy.[125] Notwithstanding the skeptics, the Fed's recent handling of the federal funds rate has received less criticism than OIRA's management of the SCC.

III. ANALYSIS: THE APA'S ROLE IN THE SCC REVISION PROCESS

A major critique of the 2013 SCC revision process was that it did not comport with APA notice and comment procedures. The first SCC revision, the process that culminated in the release of the 2013 SCC, set two precedents. First, individual agencies promulgating rules that involve the SCC *will not* re-notice a proposed rule when it substitutes an old SCC with a revised SCC in the final rule. Second, the interagency working group *will not* submit revised SCCs for APA notice and comment independent of a proposed rule. Some members of Congress view these precedents as inconsistent with the APA.[126] This Part examines whether each precedent conforms to the APA and concludes that, despite congressional concerns, both precedents are consistent with current judicial interpretations of the APA.[127]

A. THE RE-NOTICE CONTEXT

Following the June 2013 release of the revised SCC (in a rule regarding efficiency standards for microwave ovens[128]) the Department of Energy ("DOE") received a petition for reconsideration of the rule from the Landmark Legal Foundation ("Landmark Legal").[129] Relying on *Connecticut*

(Feb. 12, 2013), *available at* http://www.phil.frb.org/publications/speeches/plosser/2013/02-12-13_siepr.pdf ("[W]hile our models suggest that forward guidance is a useful policy tool, we must remain humble about its expected benefits in the real world of imperfect commitment, imperfect credibility, and difficult-to-manage expectations.").

123. Allianz Global Investors is the investment management arm of Allianz, a global financial services company. *See Company History*, ALLIANZ GLOBAL INVESTORS, http://www.allianzgi.com/en/Aboutus/Pages/History.aspx (last visited Nov. 10, 2014).

124. HOCHSTEIN, *supra* note 24, at 8.

125. *Id.* at 5.

126. *See supra* notes 86–89 and accompanying text.

127. Regardless of whether legal reasons require the SCC to undergo APA notice and comment, whether policy reasons require APA notice and comment is a separate question. Discussion of this policy question, however, is outside the scope of this Note.

128. *See supra* note 82 and accompanying text.

129. Energy Conservation Program for Consumer Products: Landmark Legal Foundation; Petition for Reconsideration, 78 Fed. Reg. 49,975, 49,976 (Aug. 16, 2013) (to be codified at 10 C.F.R. pt. 430). Founded in 1976, Landmark Legal describes itself as "America's oldest conservative, non-profit, public interest law firm." Mark R. Levin, *Letter from President*, LANDMARK LEGAL FOUND.,

Light & Power Co. v. Nuclear Regulatory Commission,[130] the petition argued that since the proposed and final versions of the rule relied on different SCC values, the APA required the DOE to re-notice the proposed rule using the revised SCC and allow for another comment period.[131]

In *Connecticut Light & Power Co.*, the court reviewed a rule governing fire protection systems in nuclear power plants.[132] The plaintiff, a nuclear power plant, complained that the significant differences between the proposed and final rules meant that the initial notice did not provide sufficient notice of the terms or substance of the final rule, thus necessitating an additional comment period.[133] Although the court found that "[a]t almost every step of the way, the [Nuclear Regulatory Commission]'s procedures were less than exemplary," the court did not require the Commission to re-notice the rule.[134] Despite its misgivings about the Nuclear Regulatory Commission's process, the court reasoned that the final rule was a "logical outgrowth" of the proposed rule.[135] According to the court, "the notice of proposed rule-making clearly revealed both the precise 'subject matter' and the 'issues' involved as required by the APA. The final rules were simply more stringent versions of the proposed rules."[136]

Applying *Connecticut Light & Power Co.* to the microwave oven rule, Landmark Legal argued that the revised SCC did not constitute a logical outgrowth of the initial SCC because both the 2010 and 2013 SCCs are, by the interagency working group's own admission, subject to "key uncertainties" and require treatment as "provisional and revisable."[137] So long as the SCC involves such qualifications about reliability, the argument suggests, no revision could ever be a logical outgrowth of its predecessor. Thus, the DOE's substitution of the revised figures in the final rule "would not survive judicial scrutiny"[138] and a court would require the DOE to re-notice the rule.

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http://www.landmarklegal.org/DesktopFrame.aspx?frame=MESSAGE&artnumber=-1&modid=630 (last visited Nov. 10, 2014).

130. *See* Conn. Light & Power Co. v. Nuclear Regulatory Comm'n, 673 F.2d 525, 533 (D.C. Cir. 1982).

131. Energy Conservation Program for Consumer Products: Landmark Legal Foundation; Petition for Reconsideration, 78 Fed. Reg. at 49,976.

132. *Conn. Light & Power Co.*, 673 F.2d at 527.

133. *Id.*

134. *Id.* at 536–37.

135. *Id.* at 533.

136. *Id.* (internal citation omitted).

137. Energy Conservation Program for Consumer Products: Landmark Legal Petition; Petition for Reconsideration, 78 Fed. Reg. 49,975, 49,977 (Aug. 16, 2013) (to be codified at 10 C.F.R. pt. 430) (quoting Energy Conservation Program: Energy Conservation Standards for Standby Mode and Off Mode for Microwave Ovens, 77 Fed. Reg. 8526, 8555 (Feb. 14, 2012) (to be codified at 10 C.F.R. pts. 429–30); Energy Conservation Program: Energy Conservation Standards for Standby Mode and Off Mode for Microwave Ovens, 78 Fed. Reg. 36,316, 36,351 (June 17, 2013) (to be codified at 10 C.F.R. pts. 429–30)).

138. *Id.*

Landmark Legal's reliance on *Connecticut Light & Power Co.* is misplaced, and the APA likely does not require a regulator to re-notice a proposed rule in this context. Landmark Legal's argument that the 2013 SCC is not a logical outgrowth of the 2010 figure misapplies the *Connecticut Light & Power Co.* analysis. As Landmark Legal noted, the interagency working group littered the 2010 SCC with caveats and qualifications.[139] With so many reasons to question the reliability of the SCC, it may, at first glance, appear difficult for any revision to follow logically from such dubious estimates. However, the working group imported whatever weaknesses and limitations existed in the 2010 figure to the 2013 figure, and in preparing the revised SCC did not "revisit" any of the initial "modeling decisions."[140] Like the final fire protection system rule before the *Connecticut Light & Power Co.* court, the 2013 SCC is simply a "more stringent version" of its predecessor.[141] Thus, contrary to the petitioner's assertion, the DOE's decision to substitute the 2010 SCC with the 2013 SCC in the final rule would likely withstand judicial scrutiny under *Connecticut Light & Power Co.*

The 2013 SCC revision process set a precedent that an agency substituting an old SCC for a revised SCC between the proposed and final rule will not re-notice the rule. So long as the new SCC does not reflect different modeling decisions than the old SCC, courts are unlikely to criticize this precedent on APA grounds.

B. THE INDEPENDENT NOTICE CONTEXT

The 2013 revision process set a second precedent that a revised SCC will not undergo independent notice and comment. The absence of direct APA notice and comment on the SCC (as opposed to the indirect notice and comment through proposed rules using the SCC) was a common complaint in the congressional response to the 2013 SCC.[142] Whether the APA requires the SCC to undergo independent notice and comment depends on whether the SCC is a "rule" under the APA. OIRA has argued that the SCC is not a rule.[143]

The APA defines a "rule" broadly[144] suggesting that the APA drafters wanted the label to attach depending on substance (what rules do) rather

139. *See supra* note 94.

140. INTERAGENCY WORKING GRP. ON SOC. COST OF CARBON, U.S. GOV'T, TECHNICAL SUPPORT DOCUMENT: TECHNICAL UPDATE OF THE SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12,866, at 2 (2013) [hereinafter 2013 SCC]. These un-revisited decisions include judgments and assumptions "with regard to the discount rate, reference case socioeconomic and emission scenarios, [and] equilibrium climate sensitivity." *Id.*

141. *See Conn. Light & Power Co.*, 673 F.2d at 533.

142. *See supra* notes 86–89 and accompanying text.

143. *Hearing*, *supra* note 13, at 12 (statement of Howard Shelanski, Administrator, Office of Information and Regulatory Affairs).

144. *See supra* note 32 and accompanying text.

than form (what rules may be called). More than a half-century of case law clarified that a rule is a subordinate term of a statute—"an offspring of the [promulgating] statute."[145] A rule "implements, interprets, or makes specific a law enforced or administered by the agency" and "requires compliance."[146] By these guidelines, OIRA's position that the SCC is not a rule appears well founded. No statute calls for or authorizes the SCC, meaning that the SCC is not an "offspring" of a statute. Agencies use the SCC to implement, interpret, or make specific the laws they enforce, but the SCC does not, on its own, oblige an agency to do anything. The working group presented the SCC to facilitate cost-benefit analyses in compliance with Executive Order 12,866,[147] an order which itself does not require agency compliance.[148]

In summary, the two precedents the 2013 SCC revision process set do not run afoul of the APA, because a court will likely regard a revised SCC that uses the same modeling decisions as the preceding SCC as a logical outgrowth of the original rule. Further, a court will likely conclude that the SCC is not a rule under the APA, meaning that the APA does not require independent notice and comment. Any suit seeking for a court to force the SCC to submit to the APA's notice and comment process is unlikely to succeed.

IV. RECOMMENDATION: A COMMON PROBLEM, A COMMON SOLUTION

Although the SCC and the federal funds rate serve different purposes and audiences, they share many characteristics.[149] These common characteristics suggest that when the SCC and the federal funds rate confront a similar problem, the solution to one may work well for the other. In this case, the SCC revision process suffers from a mismatch between the interagency working group's actions and public expectations.[150] Confronted with a similar problem, the Fed developed and refined its forward guidance strategy, enabling it to better communicate its intentions regarding the federal funds rate.[151]

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145. 73 C.J.S. *Public Administrative Law and Procedure* § 212 (2014) (citing United States v. Mersky, 361 U.S. 431, 437 (1960)).

146. *Id.* (citing Kachemak Bay Watch, Inc. v. Noah, 935 P.2d 816, 825 (Alaska 1997); Dep't of Revenue of Fla. v. Vanjaria Enters., Inc., 675 So. 2d 252, 255 (Fla. Dist. Ct. App. 1996)).

147. 2010 SCC, *supra* note 4, at 1 ("The purpose of the [SCC] estimates presented here is to allow agencies to incorporate the social benefits of reducing [CO_2] emissions into cost-benefit analyses of regulatory actions . . . .").

148. The interagency group derives its authority to set the SCC from Executive Order 12,866, which includes this disclaimer: "This Executive order . . . does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person." Exec. Order No. 12,866, 58 Fed. Reg. 51,735, 51,744 (Sept. 30, 1993). In short, no one can sue an agency for non-compliance with the executive order.

149. *See supra* notes 25–30 and accompanying text.

150. *See supra* Part II.A.3 (discussing the criticism of the SCC revision process).

151. *See supra* Parts II.B.2–3 (discussing the development of the Fed's forward guidance strategy and its effectiveness).

This Part argues that the interagency working group can respond to some of its critics' concerns by adopting elements of the Fed's forward guidance strategy. Four factors determine the effectiveness of a forward guidance strategy: low conditionality, high credibility, high transparency, and high forecasting accuracy.[152] This Part discusses how the interagency working group can apply each of these factors to future SCC revisions.

A. LOW CONDITIONALITY

The more conditions (i.e., greater conditionality) attached to a forward guidance statement, the more "market participants might doubt the commitment of policymakers."[153] Conditionality thus diminishes the effectiveness of forward guidance. The Fed's forward guidance outlines threshold economic conditions that must exist before it considers changing the federal funds rate.[154] As economic conditions worsened, the Fed desired to increase confidence that the federal funds rate would remain low, and it replaced broad language in forward guidance statements with increasingly specific language.[155] In publicly binding itself to more precise and explicit conditions, the Fed reduced its discretion to adjust the federal funds rate, thereby lowering the conditionality of its forward guidance.

Presently, the interagency working group has committed to revisit the SCC "on a regular basis" or as model updates that reflect the growing body of scientific and economic knowledge become available.[156] The interagency working group also "continue[s] to investigate potential improvements to the way" it calculates the SCC.[157] This language provides the working group with broad discretion as to when and how it revises the SCC and gives the rule high conditionality. The group should strengthen its commitment to the SCC-setting process by more clearly defining threshold conditions that will trigger an SCC revision process.

B. HIGH CREDIBILITY

Effective forward guidance strategies depend on how "credible and consistent" policymakers are when conveying their expectations about the future path of the economy.[158] Behavior in the market changes when the public believes central bankers "to have superior knowledge about the future path of the economy."[159] The public also adjusts its behavior according to its expectation that bankers will not act until the Fed's stated conditions for

152. HOCHSTEIN, *supra* note 24, at 5.
153. *Id.*
154. *See supra* note 119 and accompanying text.
155. *See supra* notes 117–19 and accompanying text.
156. *See* 2010 SCC, *supra* note 4, at 4.
157. 2013 SCC, *supra* note 140, at 4.
158. HOCHSTEIN, *supra* note 24, at 5.
159. *Id.*

changing the rate exist.[160] Credibility in this context is "hard won but can be easily lost," and rebuilding credibility can come at great cost.[161]

Unlike the Fed, which has had more than a century to cultivate (or at times re-cultivate) its credibility,[162] the interagency working group has only existed since 2010. It has had few opportunities to showcase a superior knowledge of climate change economics or demonstrate its commitment to the conditions for changing the SCC (such as they exist). Still, in its brief existence the interagency working group has taken more confidence-eroding than confidence-building actions. Observers across the ideological spectrum have expressed skepticism at the working group's analytical methods,[163] and the quiet announcement of the revised SCC raised suspicions of the working group's motives.[164] The significant increase in the 2013 SCC values relative to the 2010 values added to the sense of unreliability surrounding the working group and the SCC.[165]

Given the complexity of climate change economics, some criticism aimed at the working group and the SCC may not be entirely fair.[166] However, it is within the working group's power to respond to objections concerning its methodology and transparency.[167] The Obama Administration should also embrace rather than evade opportunities to address stakeholder concerns about the SCC. Consider the House subcommittee hearing. Rather than send someone who had participated in the SCC revision process, or even the initial SCC-setting process, the Administration sent a person who had been in his position less than a month and who had been teaching law at Georgetown University during the relevant period.[168] Such actions contribute to the feeling that "[t]he Obama [A]dministration hasn't always leveled with" the public about the SCC.[169] The Administration can begin to increase the

160. *See id.* ("[P]olicymakers can signal their commitment to follow a time-inconsistent policy going forward and not to 'remove the punch bowl [in time] but allow the party to continue until very late in the evening.'" (quoting Plosser, *supra* note 122, at 5)); *supra* Part IV.A.

161. Plosser, *supra* note 122, at 6. "Following nearly two decades of low inflation in the 1950s and early 1960s, the Fed lost its reputation in the late 60s and early 70s, resulting in double-digit inflation. The cost of restoring that reputation was the wrenching recession of the early 1980s." *Id.*

162. Congress organized the Federal Reserve System in 1913. BD. OF GOVERNORS OF THE FED. RESERVE SYS., *supra* note 25, at 2.

163. *See supra* Part II.A.3 (discussing responses to the SCC's debut and revision).

164. *See id.*

165. *See id.*

166. *See supra* note 94 (discussing difficulties in setting the SCC).

167. *See infra* Parts IV.C–D (discussing the working group's transparency and methodology).

168. *See supra* note 89. I mean no disrespect to Administrator Shelanksi. His credentials and professional experience equipped him to ably respond to the subcommittee's questions about the generalities of the SCC, and he could not have been reasonably expected to testify in any meaningful way about a specific revision process in which he did not participate or supervise.

169. Drajem, *supra* note 7 (quoting economist Frank Ackerman) (internal quotation marks omitted).

credibility of the working group by welcoming public opportunities (like congressional hearings) to defend its efforts.

C. *HIGH TRANSPARENCY*

The Fed manages the federal funds rate with a high degree of transparency. It meets eight times each year to review the rate and publishes the meeting dates on its website.[170] The Fed also publishes the names of persons who participate in each meeting,[171] and after the meeting issues a press release summarizing its discussion and indicating how participants voted.[172]

In contrast, one congressman said of the SCC revision process: "I don't know the names of the people that were involved in this; I don't know the minutes of it; I don't know the conversation that occurred."[173] Moreover, the Obama Administration sent an official to answer congressional questions about the SCC setting and revision process who had no involvement with either the initial SCC development process nor the 2013 revision.[174] Given President Obama's stated commitment "to creat[e] an unprecedented level of openness in Government,"[175] the interagency working group should better disclose not only the calculations that result in the SCC, but also disclose who makes those calculations and the assumptions and policy judgments that underlie them.

D. *HIGH FORECAST ACCURACY*

When a central bank like the Fed "has demonstrated superior macroeconomic forecasting abilities in the past, market participants" are more likely to believe the bank's forward guidance.[176] Here again, the interagency working group's short existence has limited its opportunity to develop a strong record of accurately forecasting future climatological effects on economic conditions. The uncertainties involved in calculating the SCC,[177] as well as the vigorous policy debates surrounding climate change,[178] will

170. *Federal Open Market Committee*, *supra* note 22.

171. *Id.*

172. *Id.*

173. *Hearing*, *supra* note 13, at 23 (statement of Rep. James Lankford, Chairman, H. Subcomm. on Energy, Policy, Health Care, and Entitlements).

174. *See supra* note 89.

175. Transparency and Open Government: Memorandum for the Heads of Executive Departments and Agencies, 74 Fed. Reg. 4685, 4685 (Jan. 21, 2009).

176. HOCHSTEIN, *supra* note 24, at 5.

177. *See supra* note 94.

178. Prominent public policy organizations from across the ideological spectrum have commented on the SCC. *See* Laurie Johnson, *Climate Deniers' New Gambit: The Updated SCC ("Social Cost of Carbon")*, NAT. RESOURCES DEF. COUNCIL (July 17, 2013), http://switchboard.nrdc.org/blogs/ljohnson/climate_deniers_new_gambit_the.html; Paul C. "Chip" Knappenberger, *An Example of the Abuse of the Social Cost of Carbon*, CATO INST. (Aug. 23, 2013, 5:17 PM),

complicate the working group's success in forecasting.[179] In this regard, constructive criticism from climate scientists and economists outside the working group can refine the working group's SCC-setting process and contribute to a more accurate SCC. While notice and comment creates a forum for receiving input, ways to solicit expert feedback other than notice and comment exist. The working group should continue to organize conferences and workshops that allow other researchers to participate more directly in the SCC's development.[180]

The recommendation in this Part is, admittedly, a far cry from the rigorous review of APA notice and comment that some in Congress desire.[181] However, judicial interpretations of the APA limit a court's ability to impose APA procedures on a rule "ingredient."[182] Congress, of course, has the power to change the state of the law, but support for proposed legislation[183] to require the SCC to undergo notice and comment has closely followed party lines: Republicans in the House of Representatives in support, Democrats in the Senate in opposition.[184] As a result, legislation subjecting the SCC to the APA appears unlikely to pass in Congress as presently constituted.[185]

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http://www.cato.org/blog/example-abuse-social-cost-carbon; Nicolas Loris, *Concerns over the Social Cost of Carbon*, DAILY SIGNAL (Sept. 16, 2013), http://dailysignal.com/2013/09/16/concerns-over-the-social-cost-of-carbon.

179. For example, the 2013 SCC has been simultaneously criticized as both too high and too low. *See* Johnson, *supra* note 178 (arguing the SCC is too low because "[m]ost of the damages from climate change *are not in the models*; the damages are therefore greatly *underestimated*, not inflated" and "[t]he administration discounts the future too much, not too little"); Knappenberger, *supra* note 178 (arguing that the SCC is too high because "the administration's SCC was based on an estimate of *global* rather than domestic damages" and the discount rates the interagency group used are too low).

180. *See supra* note 79 and accompanying text.

181. *See supra* note 86 and accompanying text.

182. *See supra* Part III.

183. *See supra* note 86 (discussing proposed legislation in response to the 2013 SCC revision).

184. Consider H.R. 1582, which would prohibit the EPA from using the SCC in cost-benefit analyses "unless and until a Federal law is enacted authorizing such use." Energy Consumers Relief Act of 2013, H.R. 1582, 113th Cong. § 5(a) (as referred to S. Comm. on Env't and Pub. Works, Sept. 9, 2013). In August 2013, the bill passed the Republican-controlled House of Representatives 232 to 181, with 223 Republicans voting in favor, zero against, and 181 Democrats voting against, nine in favor. *Bill Summary & Status, 113th Congress (2013–2014): H.R. 1582—All Information*, LIBR. CONGRESS, http://thomas.loc.gov/cgi-bin/bdquery/z?d113:HR01582:@@@L&summ=m& (last visited Nov. 10, 2014); *Final Vote Results for Roll Call 432*, OFF. CLERK, U.S. HOUSE REPRESENTATIVES, http://clerk.house.gov/evs/2013/roll432.xml (last visited Nov.10, 2014). Since passing in the House, H.R. 1582 has been read twice in the Democrat-controlled Senate and referred to the Committee on Environment and Public Works. *Bill Summary & Status, 113th Congress (2013–2014): H.R. 1582—All Information*, *supra*. One observer estimates the bill has only a 35% chance of passing in the Senate and becoming enacted. *H.R. 1582: Energy Consumers Relief Act of 2013*, GOVTRACK.US, https://www.govtrack.us/congress/bills/113/hr1582 (last visited Nov. 10, 2014).

185. That is, with Congress polarized along partisan lines to a historic degree. Drew DeSilver, *Partisan Polarization, in Congress and Among Public, Is Greater Than Ever*, PEW RES. CENTER (July 17,

In contrast, OIRA could immediately employ a forward-guidance-inspired communications strategy pursuant to its existing mandate.[186] Alternatively, the President could direct OIRA informally (i.e., without a new executive order) or formally (i.e., with a new executive order) to adopt a more transparent SCC revision framework.[187] Any of those actions fall entirely within the realm not merely of the executive branch, but within the power of the White House itself.[188] Thus, while adoption of a forward guidance strategy may not respond to all of the SCC critics' concerns, the solution has fewer obstacles than extending the APA's reach to include the SCC.

V. CONCLUSION

As a key ingredient in the federal rules involving CO_2 emissions, the SCC has and will continue to play a pivotal role in energy, manufacturing, and environmental regulation.[189] Although critics of the SCC revision process would like to see the SCC pass through the APA's notice and comment process, a court will not likely order an agency to re-notice a rule that uses a revised SCC in a final rule after including a preceding SCC in the proposed rule, nor order the SCC to undergo independent notice and comment.[190] However, because the SCC plays such an important role in one of President Obama's policy objectives,[191] OIRA has an incentive to manage the SCC in a way that creates public confidence, enables stakeholder participation, and ensures the integrity of SCC-based rules.[192] OIRA can respond to some of its critics' concerns and improve its own credibility by adopting elements of the Fed's forward guidance policy regarding the federal funds rate by decreasing conditionality, improving credibility, increasing transparency, and pursuing high forecast accuracy.

2013), http://www.pewresearch.org/fact-tank/2013/07/17/partisan-polarization-in-congress-and-among-public-is-greater-than-ever/.

186. *See supra* notes 48–53 and accompanying text.

187. *See supra* note 46 (discussing how presidents have used both informal and formal means to direct OIRA).

188. *See supra* note 48 and accompanying text.

189. *See supra* notes 12–17 and accompanying text.

190. *See supra* Part III.

191. *See supra* note 17 and accompanying text.

192. Letter from James Lankford & Jackie Speier, U.S. Representatives, to Howard Shelanski, Adm'r, Office of Info. & Regulatory Affairs, *supra* note 21, at 1–2.

VI. APPENDIX: TABLE

Table 1: 2010 and 2013 SCC Estimates Comparison (in 2007 dollars per metric ton of CO_2)[193]

	2010					2013			
Discount Rate	**5%**	**3%**	**2.5%**	**3%**		**5%**	**3%**	**2.5%**	**3%**
Year	**Avg.**	**Avg.**	**Avg.**	**95th %-tile**		**Avg.**	**Avg.**	**Avg.**	**95th %-tile**
2010	4.7	21.4	35.1	64.9		11	33	52	90
2015	5.7	23.8	38.4	72.8		12	38	58	109
2020	6.8	26.3	41.7	80.7		12	43	65	129
2025	8.2	29.6	45.9	90.4		14	48	70	144
2030	9.7	32.8	50	100		16	52	76	159
2035	11.2	36	54.2	109.7		19	57	81	176
2040	12.7	39.2	58.4	119.3		21	62	87	192
2045	14.2	42.1	61.7	127.8		24	66	92	206
2050	15.7	44.9	65	136.2		27	71	98	221

193. 2010 SCC, *supra* note 4, at 1; 2013 SCC, *supra* note 140, at 3.