

Hey Now, Let's Be Social:
The Social Cost of Carbon and the Case for Its Inclusion in the Government's Procurement of
Electricity

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Abstract

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As the effects of climate change manifest themselves with an increasing degree of severity, the public's awareness and desire to address climate change steadily grows. In response to these concerns, the Federal Government has issued a number of Legislative and Executive Branch policies designed to combat climate change by encouraging renewable energy use. However, despite the impressive list of policies, the Federal Government has still largely failed to use the potentially valuable Social Cost of Carbon as a tool. While the Social Cost of Carbon continues to be further developed and understood, the place for this development is not behind closed doors, but in the public eye. Accordingly, this paper argues that the current use of the Social Cost of Carbon should be expanded beyond the President's current limited application in cost-benefit analyses of agency rulemakings. However, because of the anticipated changes associated with the Social Cost of Carbon, this expansion should be limited to a specific regulatory area that yet still involves a large enough amount of greenhouse gas emissions to generate relevant and meaningful discussion. Specifically, the paper argues that the Social Cost of Carbon should be applied to the Federal Government's procurement of electricity and presents three options for doing so: first, encouraging its use in existing procurement regulations as an additional contract evaluation factor; second, applying it as an excise tax to government purchases of carbon-producing electricity; and third, applying it as a differential price evaluation adjustment to carbon-producing electricity. The paper closes by recommending the third option for implementation, as it can be presented as simply another politically acceptable renewable energy incentive and therefore will likely be the easiest to implement.

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"We don't have time for a meeting of the flat-Earth society. Sticking your head in the sand might make you feel safer, but it's not going to protect you from the coming storm." -President Barack Obama on Climate Change. June 24, 2013.

I. INTRODUCTION

The Social Cost of Carbon (SCC) is a relatively new development in the evolution of identifiable effects of climate change. At its essence, it approximates “the monetized damages” from climate change “associated with an incremental increase in carbon (and other greenhouse gases (GHGs)) emissions in a given year” and, as a result, bears potentially significant economic and social justice implications.¹ President Obama has been at the forefront in ensuring the SCC is considered by the Federal Government, first by tasking an expert panel to create usable SCC figures and then by requiring agencies to use these figures in determining the monetary benefits of carbon reductions in cost-benefit analyses for rulemakings; an important but limited role for SCC.² This tempered application appears to consider that these SCC figures are only just beginning to be understood and are continuing to be further honed as the scientific community develops a better understanding of the full ramifications of climate change. Indeed, as will be discussed in more detail below, in a little over three and a half years, these figures have

¹ U.S. Government, Interagency Working Group on Social Cost of Carbon, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866*, 1 (February, 2010) [hereinafter Interagency Working Group on Social Cost of Carbon, *Original SCC*], <http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf>.

² *Examining the Obama Administration's Social Cost of Carbon Estimates: Hearing Before the Subcomm. on Energy Policy, Health Care, and Entitlements of the Committee on Oversight and Government Reform*, 113th Cong. 5, 7 (2013) [hereinafter *Hearing*] (statement of Hon. Howard Shelanski, Administrator for the Office of Information and Regulatory Affairs, Office of Management and Budget).

already been updated twice.³

Given these circumstances, it would be politically irresponsible to base a complete overhaul of the Federal Government's current regulatory system on the still nascent SCC figures. However, it would be equally politically irresponsible to completely ignore the overwhelming data and public perception that the SCC associated with climate change is real.⁴ Accordingly, this paper advocates an approach where the Government targets a specific regulatory area with significant GHG implications for implementation of the SCC, without subjecting the entire Federal regulatory system to the likely growing pains that will accompany the application and further development of the SCC. This will allow time for SCC to mature through active and relevant debate, while simultaneously avoiding tabling the SCC for implementation until some

³ U.S. Government Interagency Working Group on Social Cost of Carbon, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 2* [hereinafter Interagency Working Group on Social Cost of Carbon, *1st Updated SCC*] (May, 2013), http://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf; U.S. Government Interagency Working Group on Social Cost of Carbon, *Revised Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Interagency Working Group on Social Cost of Carbon* [hereinafter Interagency Working Group on Social Cost of Carbon, *2nd Updated SCC*] (November 2013), <http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/technical-update-social-cost-of-carbon-for-regulator-impact-analysis.pdf>.

⁴ See E.g. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Synthesis Report, Contribution of Working Groups I, II, and III to the Fourth Assessment Report on the Intergovernmental Panel on Climate Change*, Core Writing Team, R.K. Pachauri and A. Reisinger (Eds.) (describes results of climate research that verifies climate change is occurring and that humans are likely causing it), http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm.

unspecified date in the future when it may be too late to help prevent irreversible environmental consequences.

In particular, this paper targets the Federal Government's procurement of electricity as an ideal area for application of the SCC due to its relatively compartmentalized nature,⁵ and the significant GHG social justice implications associated with electricity generation. These social justice implications stem from the fact that since the dawn of the modern industrialized society, the citizens of the United States have depended upon the GHG emitting electricity generation capacities of power companies. In doing so, society has inadvertently subsidized the development and growth of these companies by allowing emissions that adversely impact the health and wellbeing of its members today, as well as the health and wellbeing of its members tomorrow. This inadvertent subsidy came about not through any apparent mal-intent on behalf of the power companies or willful blindness on the part of society's elected representatives, but through ignorance of the true costs that these GHG emitting electricity-generating technologies imposed. However, as the science regarding climate change and the correlated SCC continues to be further developed and understood, the crutch of ignorance can no longer be leaned upon to justify the maintenance of the status quo.

Because the SCC increases as the severity of the impacts of climate change increases,⁶ this paper begins by assessing the genesis of current climate change studies and describes the associated public awareness of climate change that will likely drive the implementation of any new policy implementing the SCC. Next, the paper lists the main

⁵ FAR Part 41 (2014)(designated acquisition section for the Federal Government's procurement of utilities, specifically including electricity).

⁶ IPCC, *supra* note 4, at Synthesis Report, Chapter 5.

federal policies designed to address climate change by calling for federal agencies to increase their procurement and use of renewable energy and thereby reduce GHG emissions, but that generally fail to incorporate the SCC in any meaningful fashion to the government's procurement of electricity. Next, the paper discusses what the SCC is and how the Federal Government has begun to apply it in the limited fashion of cost-benefit analyses of agency rulemakings. The paper then transitions to a section discussing current regulatory limitations regarding the commercial sale of electricity and the Federal Acquisition Regulation (FAR) that will impact the successful implementation of the SCC in the Federal Government's procurement of electricity. The last section of the paper discusses three potential alternatives that could be used within these parameters to successfully implement the SCC within the FAR as an additional tool to combat the effects of climate change and simultaneously ensure social justice. The first alternative would involve no change to existing policies and would simply encourage the use of the SCC as an additional evaluation factor in the government's procurement of electricity. The second involves the application of a carbon excise tax on carbon producing electricity purchased by the government. The third option involves the application of a differential price evaluation adjustment based upon the SCC associated with electricity generation.

This paper closes by recommending the third option as the best way of applying the SCC to the government's procurement of electricity based upon its political acceptability and presumably easier path to implementation as simply an additional federal policy encouraging renewable energy use.

II. PROGRESSION OF THE PUBLIC'S AWARENESS OF CLIMATE CHANGE

Climate change has been on the radar of environmental groups for a long time, but for many it appears to have only recently reached its “coming-of age” in terms of mass awareness with the release of Al Gore’s 2006 controversial film “An Inconvenient Truth.”⁷ From the Government’s standpoint, it was the following year’s Supreme Court landmark decision of *Massachusetts v. EPA* that triggered a domino effect of subsequent federal policies and judicial decisions that began to earnestly address GHGs and their potential to negatively impact climate change. This decision represented the court’s initial recognition that carbon dioxide and other GHGs met the Clean Air Act’s expansive definition of air pollutants and could be legally declared as such by the EPA.⁸ The uncontested scientific evidence presented in the case supported the legitimacy of climate change and identified real environmental consequences associated with it- ranging from rising sea levels to the increasing “ferocity of hurricanes.”⁹ Ultimately, this case was remanded to the EPA and led to the issuance of a final rule, which formally identified GHGs as air pollutants, as they may “reasonably be anticipated both to endanger public health and to endanger public welfare.”¹⁰

Indeed, in the recent years since this case was decided, the ever-increasing hard data and scientific research only seem to further support the legitimacy of climate change.

⁷ *An Inconvenient Truth* (Lawrence Bender Productions 2006).

⁸ *Massachusetts v. EPA*, 549 U.S. 497, 529-30 (2007).

⁹ *Id.* at 521-22 and 34-35.

¹⁰ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed Reg 66496, 66497, (Dec 15, 2009) (to be codified at 40 C.F.R. Chapter I).

For example, the National Oceanic and Atmospheric Association (NOAA) reported 2013 as being the 4th warmest *ever* (with the warmest occurring in 2010) since temperatures began being recorded in 1880.¹¹ In fact, NOAA has recorded the temperatures over the course of the last 16 years as consistently reaching previously unrecorded highs.¹² Over roughly the same time period, the US has been producing more than 5 billion tons of CO2 every year since 1990, rising even higher to above 6 billion between 2000-2008, before slightly decreasing to the most recently recorded levels of 5.6 billion tons in 2011.¹³ This amounted to 84% of all human produced GHG emissions in the U.S. in 2011¹⁴ and placed the US in the top 3 of CO2 producers for the entire world.¹⁵ While, to be sure, the fierce debate from naysayers about whether climate change is actually occurring

¹¹ National Oceanic and Atmospheric Administration, National Climatic Data Center, *State of the Climate: Global Analysis for Annual 2013* (December 2013), <http://www.ncdc.noaa.gov/sotc/global/2013/13>.

¹² *Id.*

¹³ Environmental Protection Agency (EPA), *Overview of Greenhouse Gases: Carbon Dioxide* (2012), <http://www.epa.gov/climatechange/ghgemissions/gases/co2.html>.

¹⁴ *Id.*

¹⁵ International Energy Agency, *Global carbon-dioxide emissions increase by 1.0 Gt in 2011 to record high*, (May 24, 2012), <http://www.iea.org/newsroomandevents/news/2012/may/name,27216,en.html>.

is far from over,¹⁶ the hard data supporting climate change has garnered the attention of both the international community¹⁷ and the Federal Government.¹⁸

The international community was the first to respond to this data, as the United Nations commissioned the Intergovernmental Panel on Climate Change (IPCC) to research climate change and assess potential causes.¹⁹ When the IPCC released its *Fourth Assessment Report* in 2007, it identified human activities as the likely cause of Climate Change.²⁰

In 2008, Congress similarly responded to the climate change debate by commissioning the National Academy of Sciences to “study and investigate the serious and sweeping issues relating to global climate change and to make recommendations regarding what steps must be taken, and what strategies must be adopted.”²¹ In 2011, the National Academy of Sciences completed their study and released a report which also stated that not only was climate change definitively occurring, the emission of GHGs from human activities were also identified as the likely culprit.²² The Academy

¹⁶ See Robert J. Brulle, *Institutionalizing Delay: Foundation Funding and the Creation of U.S. Climate Change Counter-Movement Organizations*, 122 *Climatic Change* 681, 684 (February 2014), article identified 118 “climate change counter-movement” organizations that make up the climate-change denial campaign in the U.S. and used IRS data to demonstrate a combined annual income of just over \$900 million for 91 of the organizations.

¹⁷ IPCC, *supra* note 4.

¹⁸ H.R. REP. NO. 110-240, at 5 (2007).

¹⁹ See generally IPCC, *supra* note 4.

²⁰ *Id.*

²¹ H.R. REP. NO. 110-240, at 28.

concluded with the general recommendation that immediate actions be taken to reduce GHG emissions.²³

As evidence of the public's increasing acceptance of climate change, a recent poll conducted by the Georgetown Climate Center reported 75% of respondents affirmatively indicated they believed global warming was occurring.²⁴ Further, the poll also showed that the belief in global warming crosses both party lines, with a further breakdown of 61% Republicans and 88% Democrats.²⁵

The Federal Government's consumption of carbon dioxide producing electricity represents one of the easiest targets for the government to address GHGs and climate change. According to the most recently recorded statistics by the U.S. Energy Information Administration, the Federal Government consumed 195.9 trillion Btus of electricity in Fiscal Year 2011 (FY2011), with the bulk- 104.1 trillion Btus- coming from the Department of Defense.²⁶ Practically speaking, according to Whitehouse.gov, this equates to the Federal Government being the "largest energy consumer in the U.S.

²² National Research Council of the National Academies. *America's Climate Choices* 1 (Washington, DC: The National Academies Press, 2011).

²³ *Id.*

²⁴ Georgetown Climate Center, *Polling Demonstrates Strong Support for State and Federal Government Action on Climate and Energy Policies* 1 (June, 2013), <http://www.georgetownclimate.org/sites/default/files/GCC-Polling-Memo-Final.pdf>.

²⁵ *Id.*

²⁶ U.S. Energy Information Agency (EIA), *Annual Energy Review 2011*, 29 (September 27, 2012), <http://www.eia.gov/totalenergy/data/annual/pdf/aer.pdf>.

economy.”²⁷ The corresponding emissions release from the Federal Government’s purchased electricity for the same FY2011 time period amounted to 30,481,719 metric tons of carbon dioxide equivalent, with 15,740,309 metric tons coming specifically from the Department of Defense.²⁸

In an effort to address the public’s concerns with climate change, the Federal Government has initiated a number of internal policies related to renewable energy and climate change that will enable the Federal Government to lead by example and attack these “easy targets” by reducing the carbon footprint of its federal agencies. Indeed, based upon the aforementioned scale with which the Federal Government consumes GHG emitting electricity, there is ample room for improvement.

The next section lays out the portions of the Government’s recent policies that are most relevant in helping to reduce GHG emissions through an increased emphasis on sustainability considerations, with a particular focus on reducing emissions related to electricity generation through the encouragement of renewable energy.

III. RECENT FEDERAL GOVERNMENT CLIMATE CHANGE AND RENEWABLE ENERGY POLICY INITIATIVES

The policies that form the heart of the Federal Government’s efforts to combat climate change through the encouragement of renewable energy are manifested through a series of Legislative and Executive Branch policies and guidance issued over the last

²⁷ The White House, President Barack Obama, *Monitoring Emissions and Leading by Example* (2012), <http://www.whitehouse.gov/energy/climate-change>.

²⁸ Department of Energy (DoE), Federal Energy Management Program (FEMP), *Fiscal Year 2011 Greenhouse Gas Inventory: Government Totals* (June 14, 2013), http://energy.gov/sites/prod/files/2013/10/f3/ghg_2011_2013-06-14.xlsx.

three presidential administrations. They represent the Federal Government's recognition and appreciation of the threat posed by climate change and the significant contributions that renewable energy can make in efforts to combat such threat.

However, as comprehensive as this section may appear, more important is what it does not state. While these policies collectively represent the presence of the political will necessary to address climate change, they have thus far failed to address the SCC (and the social justice issues accompanied by it) as an additional tool in combatting climate change.

In establishing the baseline of current policies addressing climate change through the encouragement of renewable energy use by federal agencies from which the SCC could be supplemented, this section begins by describing significant Legislative Branch policies. The section then transitions to significant Executive Branch renewable energy policies in the form of presidential directives and a series of agency guidance documents. The section then closes with a review of the most recently reported data displaying the largely successful results of these policies.

A. Legislative Branch Policies

Congress jumped into the federal agency renewable energy game with the issuance of Section 203 of the Energy Policy Act of 2005 (EPAAct of 2005).²⁹ Section 203 required federal agencies to acquire a minimum of 3% of their total power from renewable sources from fiscal years 2007 through 2009, 5% for fiscal years 2010 through 2012, and 7.5% for fiscal year 2013 and "each fiscal year thereafter."³⁰ Section 203's

²⁹ 42 U.S.C.A. § 15852 (West 2014).

³⁰ 42 U.S.C.A. § 15852(a)(1)-(3).

definition of “renewable energy” as “electric energy generated from solar, wind, biomass, landfill gas, ocean (including tidal, wave, current, and thermal), geothermal, municipal solid waste, or new hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric project” shows that encouragement and use of this type of energy will have direct results in reducing the Federal Government’s output of GHG emissions.³¹ Additionally, as many of the following related executive and legislative policies encouraging renewable energy use adopt Section 203’s definition of “renewable energy,” they will also aid in further reducing the Federal Government’s output of GHG emissions.³²

Congress augmented the EPA Act of 2005’s encouragement of federal agency renewable energy use with the passage of the Energy Independence and Security Act (EISA) in 2007.³³ This act established a number of policies supporting renewable energy use by federal agencies, such as:

- Section 323’s reporting requirement on the use of renewable energy in new buildings and major renovations for accountability purposes;
- Section 431’s adoption of the energy intensity reduction goals of Executive Order 13423 that will be described below;

³¹ 42 U.S.C.A. § 15852(b)(2).

³² See Exec. Order 13423, 72 Fed. Reg. 3919, 3922 (January 26, 2007); Exec. Order 13514, 74 Fed. Reg. 52117, 52126 (October 8, 2009); Federal Leadership on Energy Management, *Memorandum for the Heads of Executive Departments and Agencies*, 78 Fed. Reg. at 75211.

³³ Energy Independence and Security Act of 2007, Pub. L. No. 110-140, §§ 431-441, 121 Stat. 1492, 1607-23 (codified as amended at 42 U.S.C.A. §§ 17001-17096 (West 2014)).

- Section 514's indefinite approval of agencies' authority to enter into Energy Savings Performance Contracts (ESPCs);
- Section 512's authorization for the use of any combination of appropriated funds and private financing to fund an ESPC; and
- Section 517's reinforcement of the continued use of ESPCs through a training program.³⁴

Congress further supplemented its guidance encouraging renewable energy use under the National Defense Authorization Act of 2007, which established an additional individual goal for DoD beyond the EAct of 2005 to “produce or procure not less than 25 percent of the total quantity of electric energy it consumes within its facilities in its activities during fiscal year 2025 and each fiscal year thereafter from renewable energy sources.”³⁵

These Congressional policies go hand-in-hand with the Executive Branch's efforts to encourage renewable energy use that will be described in the next section.

B. Executive Branch Policies

The three most recent presidential administrations have all made significant efforts in establishing policies to increase renewable energy use. This section will outline the major policies addressing renewable energy from each of these administrations.

³⁴ *Id.*; *See also* 42 U.S.C.A. § 8287 (West 2014) (authorizes ESPCs as maximum 25-year contracts with energy service companies, with no up-front capital costs, to improve Federal facilities' energy efficiency. The improvements are guaranteed to generate enough energy cost savings to pay for the contract and when the contract ends, the savings go to the agency).

³⁵ 2007 Defense Authorization Act, Pub. L. No. 109-364, § 2852 (2006) (codified at 10 U.S.C. § 2911).

1. *President Clinton's Initiatives*

President William J. Clinton originally started the ball rolling for presidential policies mandating environmental considerations and encouraging renewable energy procurement in federal agency acquisitions³⁶ when he issued Executive Order 13101, “Greening the Government Through Waste Prevention, Recycling and Federal Acquisition.”³⁷ Executive Order 13101 in turn led to the issuance of the EPA’s “*Guidance on Environmentally Preferable Purchasing*.”³⁸ In implementing the Presidential directive, the EPA’s guidance advised that environmental considerations should be included and analyzed as an evaluation factor in procurements in the same manner as price, past performance, safety, etc.³⁹ This policy indirectly encouraged the procurement of renewable energy, based upon its lower impact on the environment as compared with non-renewable GHG emitting energy sources. As will be discussed below, this guidance continues to remain in effect today and can be applied with equal effect for the inclusion of the SCC into the government’s procurement of electricity.

While President Clinton had additional environmental policies related to renewable energy, they will not be addressed here as many of them were revoked and substantively consolidated by the Bush administration as will be described in the next section.

³⁶ See James C. Hershauer, George Basile, and Scott G. McNall, *The Business of Sustainability: Trends, Policies, Practices, and Stories of Success* 181 (Praeger 2011).

³⁷ Exec. Order No. 13101, 63 Fed. Reg. 49643 (Sept. 16, 1998).

³⁸ Final Guidance on Environmentally Preferable Purchasing for Executive Agencies, 64 Fed. Reg. 45810 (August 20, 1999).

³⁹ *Id.* at 45811.

2. *President Bush's Initiatives*

President George W. Bush's Executive Order 13423 was the order that revoked and, for the most part, consolidated President Clinton's environmental policies encouraging renewable energy use.⁴⁰ Issued in January of 2007 and entitled, "Strengthening Federal Environmental, Energy, and Transportation," the policy remains in effect today and provides direction to federal agencies regarding the implementation of the Bush administration's and Congress's goals to increase renewable energy use.⁴¹

Most relevant in addressing climate change through the encouragement of renewable energy procurements, Executive Order 13423, Section 2 requires agencies to obtain at least half of the EPA Act of 2005's Federal Government renewable energy requirement from newly created sources that "to the extent feasible...(are created) on agency property for agency use," and requires agency "acquisitions of goods and services" to "use sustainable environmental practices."⁴²

Next, Section 3 of the Order generally directs agencies to establish "sustainable practices for (i) energy efficiency, greenhouse gas emissions avoidance or reduction...(ii) renewable energy, including bioenergy..., (and) acquisition."⁴³ While this section of the Order generally supports renewable energy, the following sections led to more specific guidance.

⁴⁰ Exec. Order 13423, 72 Fed. Reg. at 3919.

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.* at 3920.

Section 5 of Executive Order 13423 directed the Office of Federal Procurement Policy (OFPP) to issue a guidance document on sustainable acquisitions, which included renewable energy.⁴⁴ As directed, OFPP issued this guidance document in December 2007 and entitled it, “*Acquisition of Green Products and Services.*”⁴⁵ On the topic of renewable energy within this guidance, OFPP specifically required agencies to “identify opportunities and give preference” to the “acquisition of...renewable energy,” amongst the many identified green goals.⁴⁶ The memo further identified ESPCs and Utility Energy Savings Contracting (UESC) as the preferred mechanisms to be employed in furthering an increase in “remaining energy needs from renewable sources” to meet the President’s 50% new renewable energy requirement for the EPAct’s 7.5% mandate.⁴⁷

Similarly, Section (4)(b) of Executive Order 13423⁴⁸ authorized the Chairman of the Council on Environmental Quality (CEQ) to also issue guidance regarding implementation of the Order. In March of 2007, CEQ issued this guidance and entitled it, “*Instructions for Implementing EO 13423: Strengthening Federal Environmental, Energy, and Transportation Management.*”⁴⁹ As with OFPP, CEQ recommended the

⁴⁴ *Id.* at 3921.

⁴⁵ Office of Federal Procurement Policy, *Acquisition of Green Products and Services*, 72 Fed. Reg. 73904 (December 28, 2007).

⁴⁶ *Id.*

⁴⁷ *Id.* at 73906, 73908.

⁴⁸ Exec. Order 13423, 72 Fed. Reg. at 3921.

⁴⁹ James L. Connaughton, Chairman, Council on Environmental Quality (CEQ), Executive Office of the President, *Memorandum to Heads of Executive Branch Departments and Agencies: Implementation Instructions and Requirements for Executive Order 13423* (March 28, 2007),

use of ESPCs and UESCs and suggested incorporating renewable energy into the projects “where practical.”⁵⁰ CEQ also provided a non-exclusive list of measures that could be taken to meet the President’s new renewable energy sources goal, such as: directing appropriated funding to renewable projects that would not otherwise be cost effective based upon the limitations of private sector financing; employing enhanced use leases⁵¹ with renewable energy generators; using ratepayer incentives to decrease energy consumption; and allowing agencies to retain unused appropriated funds directly related to energy savings for additional energy conservation projects.⁵² CEQ’s guidance also requires agencies to incorporate renewable distributed “on-site” generation into new construction projects, but caveated it by limiting it to either “where life-cycle cost effective” or when “enhancing energy reliability and security.”⁵³

Shifting to the purchase of electricity as a commodity, CEQ further advised that such purchases should be limited to “sources that use high efficiency and low-carbon

https://www.fedcenter.gov/kd/Items/actions.cfm?action=Show&item_id=6872&destination=ShowItem; CEQ, *Instructions for Implementing EO 13423: Strengthening Federal Environmental, Energy, and Transportation Management* (March 28, 2007) [hereinafter CEQ, *13423 Implementing Instructions*], <https://www.fedcenter.gov/Documents/index.cfm?id=6825>.

⁵⁰ CEQ, *13423 Implementing Instructions*, *supra* note 49, at 12.

⁵¹ U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-11-574, DEFENSE INFRASTRUCTURE, THE ENHANCED USE LEASE PROGRAM REQUIRES MANAGEMENT ATTENTION 1-2 (2011) (describing that enhanced-use leases can be entered under 10 U.S.C. 2667, as the statute indicates “the secretaries of the military departments have the authority to lease nonexcess real property under the control of the respective departments in exchange for cash or in-kind consideration that is not less than the fair market value (FMV) of the lease interest”).

⁵² CEQ, *13423 Implementing Instructions*, *supra* note 49, at 12-13.

⁵³ *Id.* at 13-14, 41.

generating technologies in order to reduce greenhouse gas intensity to the extent possible.”⁵⁴ While such policies would again favor renewable energy use, CEQ deferred specific inquiries on the renewable energy program and related acquisition efforts to an additional guidance document that would be subsequently issued by the Department of Energy (DOE).⁵⁵

On January 28, 2008, DOE issued the guidance referenced by CEQ and entitled it, “*Renewable Energy Requirement Guidance for EPACT 2005 and Executive Order 13423*” (Renewable Energy Guidance).⁵⁶ While the main purpose of the Renewable Energy Guidance, perhaps unsurprisingly, was to articulate the general rules that would apply to the agencies’ pursuit of both the Congressional 7.5% “Federal Purchase”⁵⁷ of renewable energy directive and President Bush’s subsequent Executive Order 13423 requiring that 50% of this number be obtained from “new” renewable energy sources,⁵⁸ some limited specific renewable energy acquisition guidance is included as well.

As with the previous two guidance documents, the use of ESPCs and UESCs are again encouraged as “cost-effective contracts to expand on-site renewable energy

⁵⁴ *Id.* at 14.

⁵⁵ *Id.*

⁵⁶ DoE, Office of Energy Efficiency and Renewable Energy, FEMP, *Renewable Energy Requirement Guidance for EPACT 2005 and Executive Order 13423*, 1 (January 28, 2008) [hereinafter FEMP, *Renewable Energy Guidance*], available at www.energy.gov/sites/prod/files/2013/10/f3/epact05_fedrenewenergyguid_0.pdf.

⁵⁷ 42 U.S.C.A. § 15852 (West 2014).

⁵⁸ Exec. Order 13423, 72 Fed. Reg. at 3919.

projects.”⁵⁹ The Renewable Energy Guidance also discusses that agencies must use distributed generation in new buildings and retrofit projects when “life-cycle cost effective” and also when “enhancing energy reliability and security.”⁶⁰

Additionally, one of the major incentives for renewable energy the Renewable Energy Guidance showcases is the statutorily authorized “double-counting”⁶¹ associated with renewable energy “produced... onsite(.)...produced on Federal lands(.)...(or) produced on Indian lands...” and used by a Federal facility.⁶² For energy produced in this manner, agencies are able to count both the actual megawatts they use, as well as the renewable energy credits (RECs) associated with its generation towards the renewable energy goals set by the EAct of 2005 and EO 13423.⁶³

The Renewable Energy Guidance also describes the general rules for accounting of RECs, which is that for every megawatt of electricity generated, there is one REC associated with its generation.⁶⁴ RECs are accounted in this manner as a secondary market involving the sale of RECs has evolved as a method to ease compliance with the emergence of various federal and state “Renewable Portfolio Standards” (RPS), which

⁵⁹ FEMP, *Renewable Energy Guidance*, *supra* note 56, at 7.

⁶⁰ *Id.* at 7.

⁶¹ 42 U.S.C.A. § 15852(c) (West 2014).

⁶² FEMP, *Renewable Energy Guidance*, *supra* note 56, at 12.

⁶³ *Id.*

⁶⁴ *Id.* at 4; *See also* Michael B. Gerrard, *The Law of Clean Energy: Efficiency and Renewables* 396 (American Bar Association 2011) (RECs typically represent the “environmental attributes associated with the production of one megawatt-hour (MWh) of electricity from a renewable resource”).

require minimum percentages of generation capacity be attributed to renewable electricity.⁶⁵ These markets allow renewable electricity generators to sell RECs attributed with their renewable energy generation to entities without enough renewable energy generating capacities to meet their RPS quotas.⁶⁶ This REC secondary market relates to the Renewable Energy Guidance as agencies must either retire the RECs attributable to their renewable energy generation or trade them on the REC secondary market in order to take advantage of the statutory “bonus.”⁶⁷ However, based upon the Renewable Energy Guidance’s interpretation of the “trade” provision, this specifically includes selling RECs to one party and purchasing them from another.⁶⁸ Of course, the Renewable Energy Guidance also describes that if an agency sells a REC without purchasing or trading for a replacement REC, instead of receiving the double-credit bonus, they will receive none at all.⁶⁹ As an example, if the DoD has installed solar panels on the property of a federally owned military base and sells RECs in the local market without purchasing or trading for replacement RECs, the DoD will receive no credit towards their agency’s renewable energy goal. However, if the DoD does acquire

⁶⁵ See Energy Information Agency, *Most States have Renewable Portfolio Standards* (February 3, 2012), <http://www.eia.gov/todayinenergy/detail.cfm?id=4850>; *Database of State Incentives for Renewables & Efficiency*, <http://www.dsireusa.org> (last visited on May 12, 2014); Todd Jones, *The Legal Basis for Renewable Energy Certificates 3* (January 31, 2014) http://www.resource-solutions.org/pub_pdfs/The%20Legal%20Basis%20for%20RECs.pdf.

⁶⁶ *Id.*

⁶⁷ FEMP, *Renewable Energy Guidance*, *supra* note 56, at 9.

⁶⁸ *Id.*

⁶⁹ *Id.*

replacement RECs for those it sells, the amount of renewable energy credited towards the agency's renewable energy goal will be credited in an amount equaling two times the amount actually produced.

A logical question is why the Federal Government created this exception. The answer is simple economics. As the Federal Government is not currently geographically constrained to areas of production as some states are,⁷⁰ this system allows agencies to take advantage of the Federal Government's presence in multiple markets and potential downward fluctuations in REC pricing that may occur in other states.⁷¹ Putting it simply, it provides another avenue for renewable energy cost reduction. As an example, electricity generated from solar sources in Washington D.C. currently sell for \$475 per REC,⁷² while similar solar generated electricity is selling in Pennsylvania for \$45 per REC.⁷³ This enables agencies producing solar electricity on federal property in Washington D.C. to sell their solar RECs at the higher rate in Washington D.C. and replace them with the cheaper solar RECs produced in Pennsylvania and use the difference as an additional subsidy for renewable energy.

As an additional alternative to the Federal Government's purchase/production of actual renewable electricity, the Renewable Energy Guidance describes that agencies can

⁷⁰ See generally Joel H. Mack, Natasha Gianvecchio, Marc T. Campopiano, & Suzanne M. Logan, *All RECs Are Local: How In-State Generation Requirements Adversely Affect Development of a Robust REC Market*, 24 *The Electricity Journal* 8 (2011).

⁷¹ FEMP, *Renewable Energy Guidance*, *supra* note 56, at 4, 9.

⁷² DC Market prices, SRECTrade (June 3, 2014), http://www.srectrade.com/srec_markets/district_of_columbia.

⁷³ PA Market prices, SRECTrade, (June 3, 2014), http://www.srectrade.com/srec_markets/pennsylvania.

simply purchase RECs on the open market to replace electricity produced by non-renewable means to meet the EPCRA 2005 and EO 13423 requirements.⁷⁴

In terms of the actual mechanics of carrying out direct renewable energy purchases, the Renewable Energy Guidance encourages that “where not prohibited by law...long-term power purchase contracts,” defined as “10 years or more,” should be used in purchasing new renewable energy.⁷⁵ However, the Renewable Energy Guidance outlines that these power purchase contracts must “substantially” contribute to the project by representing the lesser of “10 percent” of the contractor’s total renewable project costs or “the equivalent of purchasing production of 3 MW of new renewable capacity.”⁷⁶ Further, the Renewable Energy Guidance directs that specific language must be included in contracts for renewable energy/RECs that indicates the agency will retain ownership/control over the renewable energy attributes of the purchase.⁷⁷ Additionally, all Requests for Proposals should require suppliers to certify that their renewable energy/RECs have not been sold elsewhere and indicate that such purchases will be subject to third-party audit verification.⁷⁸

While most of the Bush administration’s policies still remain in effect today, the next presidential administration continued to build on this foundation and supplemented

⁷⁴ FEMP, *Renewable Energy Guidance*, *supra* note 56, at 10.

⁷⁵ *Id.* at 14.

⁷⁶ *Id.*

⁷⁷ *Id.* at 11.

⁷⁸ *Id.* at 12.

it with additional renewable energy policy initiatives that will be outlined in the next section.

3. *President Obama's Initiatives*

On October 5, 2009, President Barack H. Obama provided further updates to the existing body of renewable energy guidance when he issued Executive Order 13514, “Federal Leadership in Environmental, Energy and Economic Performance.”⁷⁹ In this Order, he stressed that in creating a “clean energy economy(,)...the Federal Government must lead by example” and accordingly increased GHG accountability by directing agencies to “measure, report and reduce their greenhouse emissions from direct and indirect activities...” of which renewable energy use would play a vital role.⁸⁰

Additionally, the President further supported renewable energy use by indicating that it would be the policy of the U.S. to prioritize agency actions based on a “full accounting of both economic and social benefits and costs and...expanding projects that have net benefits...” of which renewable energy projects would be expected to benefit from the likely resulting higher prioritization score.⁸¹ Executive Order 13514’s specific implementation of this general prioritization policy is discussed in further detail below.

In implementing this Order, the President followed through with a campaign promise of emphasizing government transparency⁸² by indicating that all efforts in

⁷⁹ Exec. Order 13514, 74 Fed. Reg. 52117, 52117 (October 8, 2009).

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² Gerhard Peters and John T. Woolley, *Press Release - Obama Pledges Most Transparent and Accountable Administration in History* (August 15, 2007), <http://www.presidency.ucsb.edu/ws/?pid=93244>.

pursuit of the goals of the EO would be made “publicly available on Federal websites.”

⁸³ As part of this accounting, agencies were individually directed to set GHG reduction goals for the year 2020 ⁸⁴ and ultimately set an aggregate government-wide reduction amount of 28% for direct emissions (such as from electricity), ⁸⁵ and 13% reduction from indirect emissions (such as from employee travel purchases). ⁸⁶ So not only were agencies receiving general policy directives encouraging renewable energy efforts, they were also being held publically accountable to meet these standards through these reporting requirements. In helping to meet these goals, he also directed agencies to seek “opportunities with vendors and contractors to address and incorporate incentives to reduce greenhouse gas emissions” and in identifying “changes...to utility...services” as an example category, he provided an additional layer of support to indirectly encourage renewable energy. ⁸⁷ A guidance document issued by GSA entitled, “Executive Order 13514, Section 13: Recommendations for Vendor and Contractor Emissions” provides additional detail on this topic and will be discussed in further detail below under the section, “The Incorporation of the Social Cost of Carbon Into the Government’s

⁸³ Exec. Order 13514, 74 Fed. Reg. at 52117.

⁸⁴ *Id.*

⁸⁵ The White House, Office of the Press Secretary, *President Obama Sets Greenhouse Gas Emissions Reduction Target for Federal Operations* (January 29, 2010), <http://www.whitehouse.gov/the-press-office/president-obama-sets-greenhouse-gas-emissions-reduction-target-federal-operations>.

⁸⁶ The White House, Office of the Press Secretary, *President Obama Expands Greenhouse Gas Reduction Target for Federal Operations* (July 20, 2010), <http://www.whitehouse.gov/the-press-office/president-obama-expands-greenhouse-gas-reduction-target-federal-operations>.

⁸⁷ Exec. Order 13514, 74 Fed. Reg. at 52118.

Procurement of Electricity.”⁸⁸ Executive Order 13514 further foot-stomped renewable energy by directing agencies to “align() Federal Policies to increase the effectiveness of local planning for energy choices such as locally generated renewable energy.”⁸⁹

In reviewing impacts from energy usage and alternative sources, Executive Order 13514 also indicated “Environmental Impact Statements and Environmental Assessments for proposals for new or expanded federal facilities under the National Environmental Policy Act of 1969” should accompany the projects.⁹⁰ This provision again indirectly encourages renewable energy use, as procurements planning for GHG-emitting energy will likely be required to list renewable energy under the alternatives section and potentially sway the agency’s decision-makers to the more environmentally friendly renewable energy option.

As previously mentioned, in implementing Executive Order 13514’s general policy directive to prioritize agency actions based upon economic and social cost-benefit analyses, the President directed each agency to develop an annually updated “Strategic Sustainability Performance Plan” to prioritize actions based upon life-cycle returns on investments.⁹¹ In doing so, he specifically identified that agencies were to “take into consideration environmental measures as well as economic and social benefits and costs

⁸⁸ GSA, *Executive Order 13514 Section 13: Recommendations for Vendor and Contractor Emissions* 38 (April 2010) [hereinafter GSA, *Vendor Emissions*], http://www.gsa.gov/graphics/admin/GSA_Section13_FinalReport_040510_v2.pdf.

⁸⁹ Exec. Order 13514, 74 Fed. Reg. at 52118.

⁹⁰ *Id.* at 52119.

⁹¹ *Id.* at 52122.

in evaluating projects and activities based on lifecycle return on investment.”⁹² Each year, agencies are held accountable to these standards through requirements to report on their status towards the attainment of their goals. As previously discussed, these standards indirectly encourage renewable energy projects because of renewable sources’ comparatively lower GHG emissions with non-renewable energy generating sources, thereby improving their chances of higher prioritization on federal agencies’ project lists.

In 2010, the DOE’s Federal Energy Management Program (FEMP), under its delegated Federal Government renewable energy responsibilities,⁹³ released the next major Guidance document in response to the renewable energy goals established by the EAct of 2005, Executive Order 13423, EISA 2007, and Executive Order 13524- an updated version of the “*Guide to Purchasing Green Power*” (the Guide) originally issued in 2004.⁹⁴ The update to the Guide contained federal acquisition guidance specifically tailored to the purchase of renewable energy. In particular, the Guide mentions that, generally speaking, procurements have shifted from a lowest price focus to “best value” (FAR Part 1.102[a]), which allows contracting officers to use contract evaluation factors besides price, such as environmental and energy efficiency considerations.⁹⁵ In support

⁹² *Id.* at 52122.

⁹³ 42 U.S.C.A. § 15801(4) (West 2014) (defining “Secretary” as “Secretary of Energy for purposes of the Act”); 42 U.S.C.A. § 15852(a) (West 2014) (imposing oversight responsibilities to the “Secretary” of the Federal Government’s renewable energy goals “to the extent economically feasible and technically practicable”).

⁹⁴ DoE, FEMP, *Guide to Purchasing Green Power* 1, 44 (March 2010) [hereinafter FEMP, *Green Power Guide*], http://energy.gov/sites/prod/files/2013/10/f4/purchase_green_power.pdf.

⁹⁵ *Id.* at 45.

of this assertion, the Guide mentions that as defined in FAR 2.101, best value is “the expected outcome of an acquisition that, in the Government’s estimation, provides the greatest overall benefit in response to the requirement.” As an example the Guide identifies the “environmental and energy efficiency” criteria listed under FAR 8.405(c)(3) (2006) (current version at FAR 8.405-3(a)(2)(vii) (2012)) for use in determining “best value” outside of the typical focus on “price” for Blanket Purchase Agreements under an existing GSA contract. ⁹⁶

The Guide goes on to identify that in the “restructured” (or “deregulated” as they are referred to below) electricity markets, electricity is “undisputed as a standard commercial item” and can be purchased under FAR Part 12’s simplified acquisition procedures for “commercial items” based upon the large volumes of electricity being commercially traded in the public markets each day. ⁹⁷ However, the Guide recommends proceeding with care in purchasing renewable energy as a commercial item due to its relatively new widespread commercial availability and, commonsensically, advises agencies to refrain from specifications calling for renewable energy requirements that are not yet commercially available. ⁹⁸

Further, the Guide mentions that FAR Part 41, which will be discussed below, generally governs purchases of renewable power, RECs, and onsite generation systems through power purchase agreements (PPA). ⁹⁹

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.* at 46.

⁹⁹ *Id.*

The Guide also mentions that renewable energy purchases are supported by both FAR Part 23.2's "renewable energy" preferential guidance and FAR 23.7's general guidance directing agencies to purchase "environmentally preferable" products that have a "lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose..." In the same section, it also mentions additional general guidance under FAR 11.002(d) that directs agencies to consider purchasing products and services using renewable energy technologies.¹⁰⁰ The Guide further advises that in crafting renewable energy specifications, agencies should be careful to be "specific enough to limit the number of factors in competing offers to be evaluated, but general enough so as not to jeopardize the product's status as a "commercial item."¹⁰¹ Additionally, the Guide cautions against getting too specific in specifications based upon a reference to the general parameters spelled out in FAR 15.101, which establishes that as requirements become more specifically defined, "the importance of price relative to other considerations increases," such as environmental considerations.¹⁰²

The Guide concludes its discussion on "Procurement Approaches to Renewable Electricity and RECs" by pointing out the key distinction in acquisition approach between "restructured/competitive markets" (or "deregulated") with "fully regulated markets."¹⁰³ Essentially, agencies can freely employ the best value principles in

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

purchasing electricity in the restructured/competitive markets, but they will be precluded from using such competitive procedures in regulated markets and required to purchase their power from the state's designated utility.¹⁰⁴ Under this same section, the Guide further advises agencies purchasing renewable "on-site systems" to ensure they coordinate with the local utility "regarding interconnection procedures, net metering, incentives, power purchase agreement (PPA) rules, tariff provisions, and standby charges."¹⁰⁵

In the next relevant section of the Guide entitled, "Using GSA, DESC or Western," some of the statutory sources of authority for renewable energy PPA's and their durations are described; such as the 10 year contract term limitation under FAR 41, DoD's 30 year term limit authority under 10 USC 2922a (which will be discussed in more detail below), and the Western Area Power Administration's similarly increased authority for contract length for facilities within its territory.¹⁰⁶

One of the most recent policy responses to further address the Federal Government's ongoing renewable energy and GHG reduction initiatives is President Barack Obama's "Climate Action Plan" issued in June of 2013 and designed to aggressively improve upon his 2009 commitment to rollback GHG emissions in the US by 2020 to 17 percent below 2005 levels.¹⁰⁷ Perhaps an easy target of opportunity based upon the United States' still not-so-stellar recent ranking of 37 out of 124 countries

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 47.

¹⁰⁶ *Id.*

¹⁰⁷ Exec. Office of the President, *The President's Climate Action Plan*, 6 (June 2013), <http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.

assessed for the sustainability of their energy architecture,¹⁰⁸ the President pledged within the Climate Action Plan to require all federal agencies to obtain at least 20% of their electricity supply from renewable energy sources.¹⁰⁹

Approximately 6 months later, on December 5, 2013, President Obama followed through with his pledge and issued a presidential memorandum directing implementation by federal agencies of his plan to increase their renewable energy usage.¹¹⁰ Specifically, the presidential memorandum directed a phase-in approach that, subject to minor exceptions, ultimately requires all federal agencies to increase the minimum percentage of renewable electricity generation (either directly or indirectly through the purchase of RECs) from 7.5% to at least 20% of their total electricity supply by 2020.¹¹¹

Based upon the results of a recent Navigant Research opinion poll demonstrating increasing levels of public support for renewable energy compared to previous years, this collection of policies couldn't come at a better time.¹¹² The next section discusses the results of these policies.

¹⁰⁸ World Economic Forum, *The Global Energy Architecture Performance Index Report 2014*, 18 (December, 2013), available at http://www3.weforum.org/docs/WEF_EN_NEA_Report_2014.pdf.

¹⁰⁹ Exec. Office of the President, *supra* note 107, at 11.

¹¹⁰ Federal Leadership on Energy Management: Memorandum for the Heads of Executive Departments and Agencies, 78 Fed. Reg. 75209 (December 5, 2013).

¹¹¹ Federal Leadership on Energy Management, Memorandum for the Heads of Executive Departments and Agencies, 78 Fed. Reg. at 75210.

¹¹² Dave Hurst & Charul Vyas, *Energy and Environment Consumer Survey: Consumer Attitudes and Awareness toward 10 Smart Energy Concepts* (2013), <http://www.navigantresearch.com/wp-assets/uploads/2013/12/WP-EECS-13-Navigant-Research.pdf>.

C. Climate Change and Renewable Energy Policy Results

Collectively, these policies established concrete renewable energy goals for agency's to strive towards and represented a significant step in the right direction towards improved long-term agency sustainability. One needs look no further than the reported numbers to see how successful these policies have been.

For example, in FY2008, the Federal Government's purchase of electricity resulted in emissions of 32,052,369 metric tons of carbon dioxide equivalent, with DoD contributing 16,349,506 metrics tons.¹¹³ Just three years later, the Federal Government's purchase of electricity in FY2011 resulted in significantly reduced emissions of 30,481,719 metric tons of carbon dioxide equivalent, with 15,740,309 metric tons coming specifically from the Department of Defense.¹¹⁴

Meanwhile, in the realm of renewable energy for FY2008, federal agencies reported total renewable energy sourcing of 3.8% and 2.94% for DoD.¹¹⁵ Fast forward 4 years later to FY2012 and agencies reported total renewable energy sourcing of 7.1% and 4.0% for DoD.¹¹⁶

¹¹³ DoE, FEMP, *2012 FEMP Annual Report to Congress Tables* (June 14, 2013), <http://energy.gov/eere/femp/downloads/fy-2012-femp-annual-report-congress-tables>.

¹¹⁴ DoE, FEMP, *Fiscal Year 2011 Greenhouse Gas Inventory: Government Totals* (June 14, 2013), http://energy.gov/sites/prod/files/2013/10/f3/ghg_2011_2013-06-14.xlsx.

¹¹⁵ DoE, FEMP, *Energy Efficiency & Renewable Energy, Biennial Report to Congress on the Progress of the Federal Government in Meeting the Renewable Energy Goals of the Energy Policy Act of 2005* (June 28, 2010), <http://energy.gov/eere/femp/downloads/report-congress-progress-federal-government-meeting-renewable-goals-energy-1>.

¹¹⁶ *Id.*

These numbers display that the Federal Government's effort to transition from emission-heavy non-renewable energy generators to cleaner renewable sources of sustainable energy has already begun paying dividends and will likely continue to do so under the newly established goals in the President's "Climate Action Plan."

While representing significant steps in the right direction, nowhere within this comprehensive list of federal policy initiatives designed to increase the Federal Government's reliance on renewable energy and combat climate change is any reference to the SCC as a tool for use with renewable electricity acquisitions.

Despite the absence of any SCC-oriented renewable electricity acquisition policies, the collective sentiment shared by each of the aforementioned legislative and executive policies displays the political drive necessary to implement a policy applying the SCC to the government's procurement of electricity...if done appropriately. As background for assessing the boundaries of this "appropriateness," the next section will analyze what the SCC is, its historical genesis within the Federal Government, and the legal authorities for its current usage.

IV. SOCIAL COST OF CARBON

What is the Social Cost of Carbon? Conceptually, economists recognize it as "the marginal external cost of a unit of emission of CO₂, denominated in terms of forgone consumption based upon the damages inflicted by that emission upon global society through additional climate change."¹¹⁷ The Federal Government (through the Executive

¹¹⁷ Robert E. Kopp and Bryan K. Mignone, *The U.S. Government's Social Cost of Carbon Estimates after Their First Two Years: Pathways for Improvement*, 6 *Economics: the Open-Access, Open-Assessment E-Journal* 1 (May 4, 2012), <http://dx.doi.org/10.5018/economics-ejournal.ja.2012-15>.

Branch) has taken it a step further and made an effort to operationalize the concept by taking the three “best available” and “peer-reviewed” scientific applications of the SCC and developing them into a combined SCC methodology required to be employed by all federal agencies in the exercise of their cost-benefit analysis responsibilities for rulemakings.¹¹⁸ However, despite being implemented by several agencies in performing cost-benefit rulemaking analyses since the time the Executive Office of the President originally released it in 2010, the guidance is not statutorily-based or even an agency rule, but is described as merely non-binding advisory guidance in the Executive Branch’s role of providing administrative oversight of agency activities.¹¹⁹

Consistent with this status, when the Executive Office’s “Interagency Working Group” originally issued the SCC figures, the Group cited to Executive Order 12866 as the authority for use of the SCC’s concept.¹²⁰ The specific section of Executive Order 12866 cited to references that agencies are required “to assess both the costs and benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.”¹²¹

¹¹⁸ *Hearing, supra* note 2, at 5 (statement of Hon. Howard Shelanski, Administrator for the Office of Information and Regulatory Affairs (OIRA), Office of Management and Budget) (describing the application of the SCC in agency rulemaking reviews as instructive guidance from OIRA to ensure agencies are properly performing cost-benefit analyses of proposed rules).

¹¹⁹ *Id.* at 12.

¹²⁰ Interagency Working Group On Social Cost of Carbon, *Original SCC, supra* note 1, at 1.

¹²¹ *Id.*

A. History of Executive Order 12866

The historical context of Executive Order 12866 was that it had been previously implemented during the Clinton Presidential Administration and established a new cost-benefit analysis regime for agency rulemakings that effectively revoked and replaced the previous Executive Orders providing similar guidance on the topic that had been issued during the Reagan Administration.¹²² Essentially, the same legal authority that was originally cited to for the revoked Reagan-era cost-benefit analysis Executive Orders provides the authority for Executive Order 12866. This rationale is found in a legal opinion issued by the Department of Justice's Office of Legal Counsel on Dec 21, 1981, which provides:

The President's authority to issue the proposed executive order derives from his constitutional power to "take Care that the Laws be faithfully executed." U.S. Const., Art. II, § 3. It is well established that this provision authorizes the President, as head of the Executive Branch, to "supervise and guide" executive officers in "their construction of the statutes under which they act in order to secure that unitary and uniform execution of the laws which Article II of the Constitution evidently contemplated in vesting general executive power in the President alone." *Myers v. United States*, 272 U.S. 52, 135 (1926).

The supervisory authority recognized in *Myers* is based on the distinctive constitutional role of the President. The "take care" clause charges the President with the function of coordinating the execution of many statutes simultaneously: "Unlike an administrative commission confined to the enforcement of the statute under which it was created . . . the President is a constitutional officer charged with taking care that a 'mass of legislation' be executed," *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579, 702 (1952) (Vinson, C.J., dissenting). Moreover, because the President is the only elected official who has a national constituency, he is uniquely situated to design and execute a uniform method for undertaking regulatory initiatives that responds to the will of the public as a whole. In fulfillment of the President's constitutional responsibility, the proposed

¹²² Exec. Order 12866, 58 Fed. Reg. 51735 (September 30, 1993) (specifically revoking President Ronald Reagan's Exec. Order Nos. 12291 and 12498).

order promotes a coordinated system of regulation, ensuring a measure of uniformity in the interpretation and execution of a number of diverse statutes. If no such guidance were permitted, confusion and inconsistency could result as agencies interpreted open-ended statutes in differing ways.

Nevertheless, it is clear that the President's exercise of supervisory powers must conform to legislation enacted by Congress. In issuing directives to govern the Executive Branch, the President may not, as a general proposition, require or permit agencies to transgress boundaries set by Congress. *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579 (1952).¹²³

While this guidance was directed towards the issuance of an executive order, the logic used in finding the executive order legally sound would appear to apply with equal force to the Interagency Working Group's Technical Support Document.

At its essence, the Technical Support Document amounts to an additional tool for agencies to use in ensuring the goals set by the President in Executive Order 12866 under his Constitutional Authority to "take Care that the Laws be faithfully executed" are met.

Notably, as with the revoked Reagan Orders,¹²⁴ Executive Order 12866 was caveated as strictly limited "to the extent permitted by law" and was only intended for "internal management of the Federal Government and does not create any right or benefit, substantive or procedural, enforceable...against the United States."¹²⁵

However, via the President's own declaration and assumption of power as the ultimate arbiter of decision-making conflicts in rulemakings between agencies and the Office of

¹²³ Proposed Executive Order Entitled 'Federal Regulation,' 5 Op. O.L.C. 59, 60-61 (February 13, 1981).

¹²⁴ Exec. Order 12291, 46 Fed. Reg. 13193 (February 17, 1981); Exec. Order 12498, 50 Fed. Reg. 1036 (January 4, 1985).

¹²⁵ Exec. Order 12866, 58 Fed. Reg. 51735, 9-10 (September 30, 1993).

Management and Budget (OMB),¹²⁶ the President exerted a more active and direct oversight authority of agency rulemaking than was common in past presidencies.¹²⁷

B. Limits of Presidential Executive Order Authority

While the case law is sparse on the limits of the Presidential authority to issue Executive orders, the two definitive cases on the subject are the Department of Justice, Office of Legal Counsel-referenced *Youngstown Sheet & Tube Co.* case¹²⁸ and the more recent *National Labor Relations Act Chamber of Commerce v. Reich*.¹²⁹

In *Youngstown Sheet & Tube Co.*, the Supreme Court reviewed the constitutionality of an Executive Order 10340 issued by President Truman seizing the nation's steel mills in response to a strike-imposed work stoppage that presented a threat to military readiness and national security in light of the ongoing Korean War.¹³⁰ In the case, the Supreme Court succinctly described that the President's power must "stem either from an act of Congress or from the Constitution itself."¹³¹ In invalidating President Truman's Executive Order 10340, the court found that not only had Congress not authorized his actions via statute, but that the President had overstepped his

¹²⁶ *Id.* at 9.

¹²⁷ Elena Kagan, *Presidential Administration*, 114 Harv. L. Rev. 2245, 2288-2290 (2001).

¹²⁸ *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579 (1952).

¹²⁹ *National Labor Relations Act Chamber of Commerce v. Reich*, 74 F.3d 1322 (D.C. Cir. 1996).

¹³⁰ 343 U.S. at 582, 589-591.

¹³¹ *Id.* at 585.

constitutional authority to “see that the laws are faithfully executed” and crossed over into the “lawmaking” function expressly entrusted to the legislature.¹³²

Next, in *Reich*, the D.C. Circuit reviewed Executive Order 12954 issued by President Clinton directing the Secretary of Labor to promulgate regulations prohibiting the Government from contracting with companies that “permanently replace lawfully striking employees.”¹³³ In the case the Appellants generally argued Executive Order 12954 violated statutory and Constitutional laws. In response, the Government argued that based upon the precedent set in *Franklin v. Massachusetts*,¹³⁴ Executive Order 12954 did not present a reviewable cause of action under the Administrative Procedure Act (APA), as the President was not an “agency” under the definition of the APA.¹³⁵ Furthermore, the Government had argued that even assuming a cause of action was present, under *Dalton v. Specter*,¹³⁶ the Supreme Court had declared that Congressional delegations of authority to the President were not reviewable by the judiciary “when the statute in question commits the decision to the discretion of the president.”¹³⁷

¹³² *Id.* at 585, 587; *See also* Kagan, *supra* note 127, at 2320-2321.

¹³³ 74 F.3d at 1324 (*quoting* Exec. Order No. 12954, 60 Fed. Reg.13023 (March 8, 1995)).

¹³⁴ *Franklin v. Massachusetts*, 505 U.S. 788 (1992).

¹³⁵ 74 F.3d at 1326.

¹³⁶ *Dalton v. Specter*, 511 U.S. 462 (1994)

¹³⁷ 74 F.3d at 1326.

However, the Court found that existing precedent under *American School of Magnetic Healing v. McAnnulty*¹³⁸ and its progeny of cases had carved out a non-statutory judicial review of situations where federal officials act outside of the scope of their “express or implied powers.”¹³⁹ In doing so, the court also recognized that the passage of the APA had not impacted this cause of action and, in fact, found it to be expressly authorized under it.¹⁴⁰ The court further opined that existing precedent had recognized that absent express Congressional preclusion of non-statutory judicial review, agency officials acting pursuant to Presidential directives were not insulated from judicial review simply because they were acting on behalf of the President.¹⁴¹ Instead, courts are specifically bestowed the “power to compel subordinate executive officials to disobey illegal Presidential commands.”¹⁴² Ultimately, the court found Executive Order 12954 was reviewable as “regulatory in nature” and struck it down as it conflicted with the National Labor Relations Act.¹⁴³

These two cases have drawn a line in the sand regarding the limitations of presidential Executive orders and determined that such orders will be subject to judicial

¹³⁸ *American School of Magnetic Healing v. McAnnulty*, 187 U.S. 94 (1902).

¹³⁹ 74 F.3d at 1327, quoting *Harmon v. Brucker*, 355 U.S. 579, 581-82 (1958).

¹⁴⁰ *Id.* at 1328.

¹⁴¹ *Id.*

¹⁴² *Id.* (quoting *Soucie v. David*, 448 F.2d 1067, 1072 n. 12 (D.C. Cir. 1971)).

¹⁴³ *Id.* at 1339.

review when taken without Constitutional or statutory authority.¹⁴⁴ Additionally, Executive orders will also be subject to non-statutory judicial review when taken pursuant to a statutory delegation that violates another law, unless the delegated authority clearly indicates otherwise.¹⁴⁵

While the dust has likely not settled on the constitutional limits of the President's authority to direct and/or oversee agency rulemakings, Executive Order 12866 remains intact as the current guiding regulatory interpretation of the law and appears to fall well within the guidelines of current judicial interpretations of the Constitutional limits of similarly-situated executive orders.¹⁴⁶

C. Events Leading to the Interagency Working Group's Social Cost of Carbon

While Executive Order 12866 is cited as providing the authority for initiating the SCC review during the Obama Administration, the chain of events that led to the adoption of the SCC actually originated in a lawsuit against the National Highway Traffic Safety Administration (NHTSA) during the President George W. Bush Administration.

¹⁴⁷ The lawsuit was brought against the NHTSA for, amongst other reasons, their failure

¹⁴⁴ See Yuka Umemoto Taylor, *With Great Power Comes Clear Accountability: Presidential Influence Over the Ozone NAAQS Reconsideration*, 42 *Env'tl. L. Rep. News & Analysis* 10978, 10985-10986 (2012).

¹⁴⁵ *Id.*

¹⁴⁶ See Kagan, *supra* note 127, at 2279; See generally T.J. Halstead, CONG. RESEARCH SERV., PRESIDENTIAL REVIEW OF AGENCY RULEMAKING (April 5, 2005), available at <http://congressionalresearch.com/RL32855/document.php?study=Presidential+Review+f+Agency+Rulemaking>.

¹⁴⁷ *Hearing, supra* note 2, at 3 (statement of Hon. Jackie Speier, Member of Congress from the State of California); See also Jonathan S. Masur & Eric A. Posner, *Climate Regulation and the Limits of Cost-Benefit Analysis*, 99 *Calif. L. Rev.* 1557, 1559-60

to assign a monetized value for the SCC that would be saved by the reduced carbon emissions accompanying an increased minimum average fuel economy for small trucks.

¹⁴⁸ In the case, despite undisputed expert testimony to the contrary, the NHTSA failed to assign a value to the benefits of a reduced SCC in performing the cost-benefit analysis of the rulemaking. ¹⁴⁹ Consequently, the court found “NHTSA’s decision not to monetize the benefits of carbon emissions reduction was arbitrary and capricious...” and remanded the case to NHTSA so the monetized value could be included in their analysis. ¹⁵⁰

Following the court’s order, agencies began to take actions in their rulemakings to ensure the inclusion of the SCC accounting. ¹⁵¹ However, their SCC analytic efforts were not coordinated, resulting in widely disparate calculations and applications. ¹⁵²

(2011); Sarah O. Ladislaw, *What is the Social Cost of Carbon*, Center for Strategic International Studies (November 7, 2013), <http://csis.org/print/47335>.

¹⁴⁸ *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 508 F.3d 508, 513 (9th Cir. 2007), case dealt with the NHTSA’s rulemaking in setting a corporate average fuel economy standard (CAFE) for light duty vehicles (such as light trucks, sports utility vehicles, minivans, etc) under the Energy Policy and Conservation act of 1975, *vacated by* 538 F.3d 1172 (2008), Court vacated the portion of the decision ordering an environmental impact statement be performed and amended to allow the agency to perform either an environmental impact statement or environmental assessment depending upon the facts.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 532-535.

¹⁵¹ Jennifer Nou, *Forty-Third Annual Administrative Law Symposium: A Happiness Approach to Cost-Benefit Analysis: Commentary: Happiness Institutions*, 62 Duke L.J. 1701, 1713 (2013).

¹⁵² *See* Masur & Posner, *supra* note 147, at 1560-1561 (describing incongruent SCC efforts undertaken by the DoE, EPA, and DOT).

It was against this backdrop that shortly after taking office in 2009, the Obama administration, through the OMB, commissioned an Interagency Working Group to review and assess different formulae for monetizing the SCC in order to select a uniform methodology that best complies with the direction of the 9th Circuit Court of Appeals' opinion.¹⁵³ As previously stated, it was in 2010 that the fruits of the Interagency Working Group's labor were realized with the release of the initial report and findings regarding the SCC for federal agency rulemakings.¹⁵⁴

D. Current Use

As currently employed by the Federal Government, the SCC figures are generally used in performing cost-benefit analyses of federal rulemakings and are specifically used to “estimate the economic damages associated with a small increase in carbon dioxide (CO₂) emissions, conventionally one metric ton, in a given year.”¹⁵⁵ In the context of damages, the SCC figure monetizes the climate change impact of increased CO₂ emissions in areas relating to, “among other things, changes in net agricultural productivity, human health, and property damages from increased flood risk.”¹⁵⁶

The actual SCC figure integrates three different SCC analytical models- DICE (Dynamic Integrated Climate and Economy), PAGE (Policy Analysis of Greenhouse Effect) and FUND (Climate Framework for Uncertainty, Negotiation, and Distribution)-

¹⁵³ *Hearing, supra* note 2, at 13.

¹⁵⁴ Interagency Working Group On Social Cost of Carbon, *Original SCC, supra* note 1.

¹⁵⁵ EPA, *Fact Sheet: Social Cost of Carbon 1* (November 2013), <http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf>.

¹⁵⁶ *Id.*

and based upon their averages creates social cost figures per ton of CO2 emissions using three different discount rates¹⁵⁷ of 2.5 percent, 3 percent, and 5 percent, and a fourth value which includes “the 95th percentile of the SCC from all three models at a 3 percent discount rate.”¹⁵⁸ The “95th percentile” factor is intended to capture a worst-case scenario where “higher-than-average damages” result from the carbon dioxide emissions.¹⁵⁹ The EPA explained that these multiple discount rates are used, as there is not currently a consensus on the appropriate discount rate for evaluations of SCC “spanning multiple generations.”¹⁶⁰ In the initial report, the rates were set for that year (2010) at \$35.10 per metric ton of CO2 produced at a discount rate of 2.5 percent, \$21.40 per metric ton of CO2 produced at a discount rate of 3 percent, \$4.70 dollars per metric ton of CO2 produced at a discount rate of 5 percent, and \$64.90 per metric ton of CO2 for the 95th percentile at a discount rate of 3 percent.¹⁶¹ The report acknowledged that “the 3

¹⁵⁷ *Id.* at 1-2 (provides the following primer on discount rates: “Let’s say you have been promised that in 50 years you will receive \$1 billion. In “present value” terms, that sum of money is worth \$291 million today with a 2.5 percent discount rate. In other words, if you invested \$291 million today at 2.5 percent and let it compound, it would be worth \$1 billion in 50 years. A higher discount rate of 3 percent would decrease the value today to \$228 million, and the value would be even lower--\$87 million—with a 5 percent rate. This effect is even more pronounced when looking at the present value of damages further out in time. The value of \$1 billion in 100 years is \$85 million, \$52 million, and \$8 million, for discount rates of 2.5 percent, 3 percent, and 5 percent, respectively. Similarly, the selection of a 2.5 percent discount rate would result in higher SCC estimates than would the selection of 3 and 5 percent rates, all else equal”)

¹⁵⁸ *Id.* at 2.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ Interagency Working Group On Social Cost of Carbon, *Original SCC*, *supra* note 1, at 1.

percent discount rate is the central value, and so the central value that emerges is the average SCC across models at the 3 percent discount rate.”¹⁶² However, the report still advised that because of “the uncertainties involved in regulatory impact analysis, (it) emphasize(s) the importance and value of considering the full range.”¹⁶³

In May of 2013, these numbers were reissued, with 2015 estimates now increased to reflect a rate of \$58 per metric ton of CO₂ at a 2.5 percent discount rate, \$38 per metric ton of CO₂ at a 3 percent discount rate, \$12 per metric ton at a 5 percent discount rate, and \$109 per metric ton of CO₂ for the 95th percentile at a discount rate of 3 percent.¹⁶⁴ But the updates were not done just yet. On November 1, 2013, Mr. Howard Shelanski, Administrator of the Office of Information and Regulatory Affairs (OIRA) at the OMB, announced the release of an additional update to the SCC numbers to address “technical corrections” to the May estimates.¹⁶⁵ As a result, the 2015 projected numbers were all adjusted downwards by \$1, with the exception of the 95th percentile projection, which remained unchanged.¹⁶⁶

Perhaps because of the relatively nascent nature of climate change science, the scientific validity of these SCC figures continue to enjoy healthy debate about whether

¹⁶² *Id.* at 25.

¹⁶³ *Id.*

¹⁶⁴ Interagency Working Group On Social Cost of Carbon, *1st Updated SCC*, *supra* note 3, at 2.

¹⁶⁵ Howard Shelanski, Administrator for OIRA, OMB, *Refining the Social Cost of Carbon* (November 1, 2013), <http://www.whitehouse.gov/blog/2013/11/01/refining-estimates-social-cost-carbon>.

¹⁶⁶ Interagency Working Group On Social Cost of Carbon, *2nd Updated SCC*, *supra* note 3, at 3.

the Interagency Working Group's numbers are too low,¹⁶⁷ too high,¹⁶⁸ or, generally speaking, simply too imprecise for monetization of carbon costs to be used as a policy-making tool at all.¹⁶⁹ It is exactly because of these wide-ranging opinions on the subject that the SCC calculations should have been subjected to an open public notice and comment period.

However, for the first three years of its existence, the SCC was only opened to notice and comment when actively applied in the cost-benefit analyses of individual rulemakings, while the original Interagency Working Group SCC findings and report

¹⁶⁷ See Nicholas Stern, *The Economics of Climate Change: The Stern Review* 322 (Cambridge University Press 2007) (estimating the SCC at \$85 per metric ton of CO₂); Frank Ackerman and Elizabeth A. Stanton, *the social cost of carbon*, 53 *Real-World Economics Review* 129 (June 26, 2010) (analyzes the limitations associated with the Interagency Working Group's models and figures and ultimately concludes that they significantly underestimate the monetized value for the SCC), available at <http://www.paecon.net/PAEReview/issue53/AckermanStanton53.pdf>.

¹⁶⁸ See Robert P. Murphy, *Testimony "The 'Social Cost of Carbon': Some Surprising Facts*, (July 18, 2013) (asserts that the Social Cost of Carbon should be close to zero, either because a higher discount rate should have been applied or the rate should have been applied from a strictly domestic perspective), http://www.epw.senate.gov/public/index.cfm?FuseAction=Hearings.Testimony&Hearing_ID=cfe32378-96a4-81ed-9d0e-2618e6ddff46&Witness_ID=ad15dcbb-2f66-4e9f-8352-529db830c9d5; See also *The Social Cost of Carbon Gambit*, *The Wall Street Journal Online* (June 30, 2013) (states the Social Cost of Carbon should be zero until a legislative determination on this calculation is made by Congress), <http://online.wsj.com/news/articles/SB10001424127887323566804578551672709633396>; Robert H. Bezdek, "The Social Costs of Carbon? No, the Social Benefits of Carbon" (January 2014) (reviews the benefits of carbon and concludes they outweigh the costs associated with climate change), <http://www.americaspower.org/sites/default/files/Social-Benefits-of-Carbon.pdf>.

¹⁶⁹ Douglas A. Kysar, *Climate Change, Cultural Transformation, and Comprehensive Rationality*, 31 *B.C. Env'tl. Aff. L. Rev.* 555 (2004) (argues that any attempt to monetize climate change is unsuitable because many of the facets of climate change are intangible and cannot be reduced to numbers with any degree of reliability).

were never subjected to a notice and comment period.¹⁷⁰ After much consternation,¹⁷¹ this was finally rectified on November 26, 2013, when the Office of Management and Budget (OMB) published the SCC findings and requested public comment.¹⁷²

E. Future Use

While the Obama administration continues to make strides in legitimizing the use of SCC in agency rulemakings, at an operational level there remains significant room for improvement. This was succinctly captured during Mr. Shelanski's July, 2013 testimony before the Congressional Subcommittee on Energy Policy, Health Care, and Entitlement, when he was asked to explain the extent to which the SCC would be applied to Government Procurement.¹⁷³

Mr. Shelanski's response was that he didn't "know the extent to which the social cost of carbon would factor into our procurement policies(,)...(but t)he main purpose for the interagency working group was so that agencies passing emissions and energy

¹⁷⁰ *Hearing, supra* note 2, at 20 (statement of Hon. Howard Shelanski, Administrator for OIRA, OMB) (verifying 18-23 rules have used the social cost of carbon in their rulemaking analysis).

¹⁷¹ See Mark Drajem, *Obama Agrees to Open Carbon-Cost Estimate to Outside Comment*, Bloomberg (November 4, 2013), <http://www.bloomberg.com/news/2013-11-04/obama-agrees-to-open-carbon-cost-estimate-to-outside-comment.html>.

¹⁷² Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order No. 12866, 78 Fed Reg 70586 (Nov. 26, 2013).

¹⁷³ *Hearing, supra* note 2, at 18 (statement of Hon. Howard Shelanski, Administrator for the Office of Information and Regulatory Affairs, Office of Management and Budget).

efficiency standards would have some kind of value that they could use in...the cost-benefit analysis...as an input into the regulatory process.”¹⁷⁴

This is where the rubber hits the road in terms of missed opportunities for the incorporation of the SCC into the government’s procurement of electricity. However, before making specific recommendations of how the government’s electricity procurement policies can be supplemented, the next section will provide a foundational understanding of the regulatory system within which these recommendations would operate.

Specifically, the section will provide a historical background of the current regulatory structure governing the sale of electricity, a general overview of the current Federal Procurement System, and details on the portion of the FAR that specifically deals with the procurement of electricity.

V. REGULATORY LIMITATIONS ON IMPLEMENTING THE SOCIAL COST OF CARBON

In discussing the current regulatory limitations on implementing the SCC, this section will begin with an overview of the historical development of the applicable statutes and regulations governing the commercial sale of electricity. Next, a brief overview of the FAR will be provided and the section will close with a discussion of the operative portions of FAR Part 41 that will govern federal agency procurements of electricity.

A. Regulatory Structure of the Commercial Sale of Electricity

Knowledge of the history leading up to the current regulatory system governing the sale of electricity is helpful in understanding the inherent regulatory limitations in the

¹⁷⁴ *Id.*

recommendations for amendment to the government's procurement of electricity that will be discussed below. Also, the history will provide some context for the unlikelihood of changing the electricity regulatory structure based upon the long-entrenched system of governance.

With that purpose in mind, the origins of the regulation of the electricity industry began in earnest with the passage of the Federal Power Act Part I in 1920, which governed the provision of hydroelectric power.¹⁷⁵ Following shortly thereafter was the Public Utility Holding Company Act of 1935 (PUHCA).¹⁷⁶ While this law was officially repealed by the passage of the EPAct of 2005, while in effect its main purpose was to combat abuses associated with the lack of transparency of public utility holding companies- those that hold ten percent or more of the voting securities of a public utility- by requiring them to register with the Securities and Exchange Commission and thereby imposing upon them mandatory reporting requirements and governance limitations.¹⁷⁷

Of more relevance for purposes of analysis here was the passage of Part II of the Federal Power Act in 1935, which established the regulatory framework still in effect today.¹⁷⁸ This statute placed regulatory authority over most intrastate sales of retail consumer electric energy in the hands of the states, with the Federal Government generally retaining regulatory authority over the interstate sales of wholesale electricity

¹⁷⁵ Federal Power Act of 1920, 16 U.S.C.A. § 791a-823d (West 2014).

¹⁷⁶ Public Utility Holding Company Act of 1935, 42 U.S.C.A. § 16451-16463, (West repealed 2005).

¹⁷⁷ Peter Z. Grossman & Daniel H. Cole, *The End of a Natural Monopoly: Deregulation and Competition in the Electric Power Industry* 66-67 (Routledge, 2003).

¹⁷⁸ Federal Power Act of 1935, 16 USC 824-824(w) (West 2014).

through a federal entity known as the Federal Power Commission (FPC).¹⁷⁹ Under this regulatory regime, the previously developed state-sponsored “natural monopoly” system thrived for several years.¹⁸⁰ As described in economic textbooks, a natural monopoly occurs when “a single firm can supply a good or a service to an entire market at a smaller cost than could two or more firms.”¹⁸¹ Under this system, states removed competition for a single state-sponsored electricity generating utility (typically a private “investor-owned utility”) and in return the utility was required to indiscriminately make electricity available to all customers at “tariff” rates with regulatory oversight provided by state and federal public utility commissions.¹⁸² In proposing the rates, the utilities were principally guided by the concept that the proposed utility rates must be “just, reasonable, and not unreasonably discriminatory.”¹⁸³ These rates served the dual purpose of protecting the public from market manipulations and unfair monopolistic price setting by the utility companies, while still preserving the ability of the utilities to recoup their “cost-of-service,” or, in other words, their costs plus a reasonable return on their capital

¹⁷⁹ Joseph P. Tomain and Richard D. Cudahy, *Energy Law in a Nutshell* 374-376 (2d ed. 2011).

¹⁸⁰ Grossman, *supra* note 177, at 70.

¹⁸¹ *Id.* at 12, quoting N. Mankiw, *Principles of Economics* 306 (Dryden Press, 1st ed. 1998).

¹⁸² Joseph P. Tomain, *Steel in the Ground: Greening the Grid with the iUtility*, 39 *Env'tl. L.* 931, 942-943 (2009).

¹⁸³ Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 *Colum. L. Rev.* 1323, 1331 (1998).

investment.¹⁸⁴ Just to provide a flavor for how this practically plays out, the ratemaking formula commonly applied in determining the “cost-of-service” is “ $R = O + (V - D)r$,” where R represents the regulated firm's revenue requirement, O the firm's operating costs, V the value of a firm's property, D the amount of depreciation applicable to V , and r the rate of return allowed by the regulator.”¹⁸⁵

This mutually beneficial quasi-contractual agreement between the regulated utility and the state government is generally referred to as the Regulatory Compact.¹⁸⁶ Under this scenario, Utilities were encouraged to continuously reinvest in their plant capacity, as the greater the value of their property, the greater their rate of return.¹⁸⁷ Thus, in order to continue to justify their increased capacity, there was a need to increase sales/consumption of electricity, which was not an issue for much of the 20th century.¹⁸⁸ However, demand eventually began to level off in the 1970's.¹⁸⁹ As the utilities had erroneously anticipated a continued increase in demand, they ended up overinvesting in their generation facilities, which in turn resulted in large amounts of excess capacity.¹⁹⁰ This overinvestment combined with a near “perfect-storm” of negative economic factors (most notably the Organization of Petroleum Exporting Countries' oil embargo and the

¹⁸⁴ Greg Goelzhauer, *Comment: Price Squeeze in a Deregulated Electric Power Industry*, 32 Fla. St. U.L. Rev. 225, 229-230 (2004).

¹⁸⁵ *Id.* at 229.

¹⁸⁶ Tomain, *supra* note 182, at 943.

¹⁸⁷ Tomain and Cudahy, *supra* note 179, at 192.

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

United States' significant reliance on oil-powered generators) to cause electricity prices to skyrocket.¹⁹¹ This triggered an immediate decrease in retail consumer consumption of electricity that the utility companies had not anticipated.¹⁹²

In response to this crisis, President Jimmy Carter signed into law the Public Utilities Regulatory Policies Act (PURPA) as part of the National Energy Act in 1978.¹⁹³ One of the major accomplishments of this law was the creation of a new market for alternative sources of energy.¹⁹⁴ It encouraged co-generation and small power generation from "qualifying facilities" (QFs) which were defined as those producing 80 megawatts of power or less, and renamed the FPC as the Federal Energy Regulatory Commission (FERC).¹⁹⁵

One of FERC's early decisions that contributed to the development of a competitive market for electricity was to require that public utilities had to purchase excess power generated by QF's at the "fully avoided cost" which was the amount that it would have cost the utility to produce the electricity itself.¹⁹⁶ Accordingly, PURPA essentially created a new wholesale generation market.¹⁹⁷ However, the cheaper electricity produced by the QFs was still outside the grasp of retail consumers and they

¹⁹¹ *Id.* at 379.

¹⁹² *Id.*

¹⁹³ Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, § 210, 92 Stat. 3117 (codified as amended in scattered sections of 16 U.S.C.).

¹⁹⁴ Tomain and Cudahy, *supra* note 179, at 91.

¹⁹⁵ *Id.* at 380.

¹⁹⁶ *Id.* at 380-381.

¹⁹⁷ *Id.*

wanted access to it.¹⁹⁸ Notably, it was at this point that the basis behind the establishment of a natural monopoly for the electricity industry- cheaper for one company to produce electricity than multiple companies- ceased to be supported by the objective facts (some argue it never was¹⁹⁹) and called for a regulatory update to reflect the changed circumstances.²⁰⁰

The Energy Policy Act (EPAct) of 1992 was passed to facilitate greater access to the wholesale market for the non-utility generators.²⁰¹ In furtherance of this purpose, the EPAct exempted wholesale generators from PUHCA's ownership restrictions to ease the development of a competitive wholesale market.²⁰² The EPAct also provided FERC with broad authorities to ensure access by third-party wholesale generators to the utilities' transmission systems.²⁰³ However, regulatory authority over retail transmission was specifically exempted from FERC's control.²⁰⁴ Despite these limitations, FERC's power had been extended significantly and led to the issuance under this authority of Order Numbers 888 and 889.²⁰⁵

¹⁹⁸ *Id.* at 381-382.

¹⁹⁹ *See generally* Grossman, *supra* note 177.

²⁰⁰ Tomain and Cudahy, *supra* note 179, at 382.

²⁰¹ Energy Policy Act of 1992 (EPAct), Pub. L. 102-486, 106 Stat. 2776, 2905-21 (codified as amended at 42 U.S.C. 13201).

²⁰² *Id.*; Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (repealing the rest of PUHCA).

²⁰³ *Id.*

²⁰⁴ *Id.*; *See also* Richard D. Cudahy, *Retail Wheeling: Is This Revolution Necessary*, 15 Energy L.J. 351, 351 (1994).

Order Number 888 required utilities with transmission facilities to create tariffs that would apply equally and non-discriminatorily to all generators of electricity.²⁰⁶ Utilities were also required to “unbundle” their services and file tariffs with separate rates and terms of use for generation service, transmission service, and ancillary services.²⁰⁷ In addition to this functional unbundling, the utilities were also prohibited from providing preferential treatment to the generation facilities they owned, with the regulation specifically requiring them to charge the same rate for transmission that would be charged to third-party wholesale generators.²⁰⁸

Order Number 889 required utilities to create a system called “OASIS” (open access same-time information system) to provide third-party wholesale generators with equal access to all transmission information to which a transmission owner would be privy.²⁰⁹ Additionally, it added additional prohibitions to prevent transmission owners from favoring affiliate generators in addition to the previously mentioned prohibitions under Order 888 which prevent favoring generators from the same company.²¹⁰ As both orders were substantially upheld against judicial challenge, they continue to be the ruling

²⁰⁵ Cudahy, *supra* note 204, at 387-388.

²⁰⁶ Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, 61 Fed. Reg. 21,540, 21,552 (May 10, 1996) (to be codified at 18 C.F.R. pts. 35 and 385).

²⁰⁷ *Id.*

²⁰⁸ Tomain and Cudahy, *supra* note 179, at 388.

²⁰⁹ Open Access Same-Time Information System (Formerly Real-Time Information Networks) and Standards of Conduct, 61 Fed. Reg. 21737 (May 10, 1996)(to be codified at 18 C.F.R. pt. 37).

²¹⁰ *Id.*

law of the land.²¹¹ FERC went on to again address the operation of transmission facilities by issuing Order No. 2000²¹² to provide additional guidance as to how these systems should be operated to maximize competition.²¹³

Based on this historical regulatory backdrop, current retail sales of electricity remain largely within the authority and control of the states.²¹⁴ However, 16 states have deregulated at least some aspects of electricity generation, which has allowed for the restructuring of their systems to shift away from natural monopolies and allow the competitive sale of retail electricity within their borders.²¹⁵ While deregulated electricity markets have certainly had some negative results,²¹⁶ recently the results have been promising as prices in deregulated markets begin to fall below regulated markets.

²¹⁷ If these trends continue, the number of markets that have been opened for competition

²¹¹ *New York v. FERC*, 535 U.S. 1 (2002).

²¹² Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, 76 Fed. Reg. 49,842 (August 11, 2011) (to be codified at 18 C.F.R. Part 35).

²¹³ Tomain and Cudahy, *supra* note 179, at 391.

²¹⁴ *Id.* at 370.

²¹⁵ U.S. Energy Information Agency, *Status of Electricity Restructuring by State*, (September 2010)
http://www.eia.gov/electricity/policies/restructuring/restructure_elect.html.

²¹⁶ See generally Steven Ferrey, *Soft Paths, Hard Choices: Environmental Lessons in the Aftermath of California's Electric Deregulation Debacle*, 23 Va. Envtl. L.J. 251 (2004) (describing California's failed attempt at deregulating their electricity industry); See also Inara K. Scott, *A Model for Alaska: Deregulation in the Far North*, 16 Alaska L. Rev. 329, 346-347, describing Montana's issues with deregulation (1999).

²¹⁷ See Jeffrey Tomich, *2 states feel the market heat as their deregulated neighbors reap rewards*, Energywire (January 29, 2014),
<http://www.eenews.net/energywire/stories/1059993615>; Jim Malewitz, *Report:*

will likely increase, and, as will be discussed below, magnify the utility of incorporating the SCC as an additional evaluation factor in the Federal Government’s procurement of electricity.

B. Overview of the FAR

Turning now to the history of federal acquisitions, the FAR was originally created based upon a Congressional delegation to the Administrator of the Office of Federal Procurement Policy (OFPP) to create a single set of federal procurement policies for all federal agencies.²¹⁸ OFPP, in turn, had been created by Congress within the Office of Management and Budget in 1974 to oversee federal procurement policy.²¹⁹ The FAR was created by OFPP to consolidate individual agency procurement regulations into one single governing regulation.²²⁰

While the Administrator of OFPP has ultimate authority over the FAR’s legal compliance,²²¹ the day-to-day issuance and maintenance of the FAR is statutorily delegated to the Administrator of the GSA, the Secretary of Defense, and the Administrator of the National Aeronautics and Space Agency as members of the FAR

Electricity Prices Falling Since Deregulation, Texas Tribune (December 19, 2013)
<http://www.texastribune.org/2013/12/19/report-electricity-prices-falling-deregulation/>.

²¹⁸ 41 U.S.C.A. § 1121(b) (West 2014).

²¹⁹ 41 U.S.C.A. § 1101 (West 2014) (stating that the OFPP was created to “provide overall direction of Governmentwide procurement policies, regulations, procedures, and forms for executive agencies”).

²²⁰ OMB, OFPP, *Federal Acquisition Regulation System; Other Procurement Rules and Regulations*, 45 Fed. Reg. 48076 (July 17, 1980).

²²¹ 41 U.S.C.A. § 1303(a)(5) (West 2014)

council.²²² They are responsible for approving any changes or updates to the FAR.²²³ However, in the event they cannot reach consensus in a timely manner, the Administrator of OFPP has the authority to issue regulations.²²⁴ The Administrator of OFPP has not exercised this authority as the implementation of the FAR has been established in a “collegial manner.”²²⁵

C. FAR Part 41, Federal Acquisition of Electricity

Part 41 of the FAR contains the Federal Government’s policies governing the purchase of all utility services,²²⁶ including electricity purchases.²²⁷ Within this system, the General Services Administration is designated as the lead federal agency for the procurement of utility services for other federal agencies,²²⁸ subject to a 10-year cap on such contracts.²²⁹ This authority also includes the related functions of managing public utility services and representing federal agencies in proceedings before federal and state

²²² 41 U.S.C.A. § 1303(a) (West 2014); See also FAR. 1.201-1 (2014) (delegating further day-to-day upkeep of the FAR to the Defense Acquisition Regulations Council for military agencies and Civilian Agency Acquisition Council for civilian agencies).

²²³ *Id.*

²²⁴ 41 U.S.C.A. § 1121(d) (West 2014).

²²⁵ John Cibinic, Jr., Ralph C. Nash, Jr., and Christopher R. Yukins, *Formation of Government Contracts* 34 (4th ed. 2011).

²²⁶ FAR 41.100 (2014).

²²⁷ FAR 41.101 (2014).

²²⁸ 40 U.S.C.A. § 501(b) and (c) (West 2014); FAR 41.103(a) (2014).

²²⁹ 40 U.S.C.A. § 501(b)(1)(B) (West 2014).

regulatory bodies.²³⁰ However, GSA’s authority over DoD is restricted by a Congressionally carved-out “best interests of national security” exemption for the Secretary of Defense²³¹ and also a limitation that GSA’s authority never “impairs or affects the authority of...any executive agency named in chapter 137 of title 10,”²³² which specifically includes the military departments.²³³ This authority, coupled with 10 USC 2304’s general statutory authorization and requirement for DoD to conduct “full and open” competition (unless an exception applies²³⁴) in all procurements for “property and services,” are cited to by the FAR as the statutes enabling DoD to “acquire utility services for military facilities.”²³⁵ Additionally, DoE’s authority to acquire utility services under the Department of Energy Organization Act, 42 U.S.C. 7251, *et seq.* is also referenced in the same provision of the FAR.²³⁶ Accordingly, GSA has in turn acted on these authorizations and delegated its utility acquisition authority to DoD and DoE.²³⁷ GSA may also delegate the utility procurement authority to other agencies upon their request.²³⁸ While different agencies may be responsible for carrying out the acquisition for

²³⁰ 40 U.S.C.A. § 501(c) (West 2014).

²³¹ 40 U.S.C.A. § 501(a)(2) (West 2014).

²³² 40 U.S.C.A. § 113(e)(3) (West 2014).

²³³ 10 U.S.C.A. § 2302(1) (West 2014).

²³⁴ 10 U.S.C.A. § 2304(c) (West 2014).

²³⁵ 10 U.S.C.A. § 2304 (West 2014); FAR 41.103(a)(2) (2014).

²³⁶ FAR 41.103(a)(3) (2014).

²³⁷ FAR 41.103(b) (2014).

²³⁸ *Id.*

electricity, they are all required by the FAR to do so in a manner that is the “most advantageous to the Government in terms of economy, efficiency, reliability, or service.”

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Practically speaking, in areas where there is only one state approved utility supplier, GSA will typically take the lead by establishing an “area-wide contract” with the local utility.²⁴⁰ Under the area-wide contract, other federal agencies can (and in most cases are required to) simply submit written orders known as “authorization forms” against this existing contract without having to enter into additional contracts with the same supplier.²⁴¹ However, when more than one supplier of electricity is available, federal agencies are expressly precluded from using an area-wide contract and are required to use competitive acquisition procedures.²⁴² This specifically includes maintaining full compliance with both FAR part 6 and FAR part 7, which detail agency responsibilities for ensuring compliance with the statutory requirement for full and open competition and also for conducting proper acquisition planning.²⁴³

While the Supremacy Clause under Article 6, Clause 2 of the Constitution would seemingly allow the federal agencies to competitively solicit electricity free from the restrictions of state law, Congress has elected to require their compliance with any

²³⁹ FAR 41.201(a) (2014).

²⁴⁰ FAR 41.204 (2014); *See also GSA’s Utility Areawide Guide*, http://www.gsa.gov/graphics/pbs/utilityguide_R2005-dXO_0Z5RDZ-i34K-pR.pdf (last visited May 14, 2014).

²⁴¹ *Id.*

²⁴² FAR 41.204(c) (2014).

²⁴³ FAR 41.202(a) (2014).

applicable state laws.²⁴⁴ Specifically, under Section 8093 of the Department of Defense Appropriations Act of 1988, Pub. L. 100-202, agencies may not use appropriated funds to purchase electricity in a manner inconsistent with state law, including “state utility commission rulings.”²⁴⁵ While very proscriptive, the FAR expressly identifies three statutory exceptions to this prohibition.²⁴⁶

First, agencies may use the authority of 42 U.S.C. 8287 to competitively purchase energy savings performance agreements for up to 25 years.²⁴⁷ Of particular note, when utilizing Section 8287’s authority to procure renewable energy generating capacity, agencies are only permitted to enter into contracts for renewable energy generation physically “applied to a Federal building” where they retain ownership of the equipment at the conclusion of the agreement.²⁴⁸ While “applied to a Federal Building” is liberally construed to include energy sources installed on the “Federal site” but not directly “on or

²⁴⁴ Major Frank D. Hollifield, *Yet Another Industry on the Taxpayer-Subsidized Dole: Why Section 8093 of the Continuing Authorization Act of 1988 (40 USC § 591) Should Be Repealed*, 65 A.F. L. Rev. 187, 190 (2010).

²⁴⁵ 40 U.S.C.A. § 591 (West 2014); FAR 41.201(d) (2014) (incorporating statutory requirement for Federal agencies to not use appropriated funds for the purchase of electricity in a manner violating state laws such as those set by state public utility commissions).

²⁴⁶ FAR 41.201(d)(2) (2014).

²⁴⁷ FAR 41.201(d)(2)(i) (2014); *See also* 42 U.S.C.A. § 8287 (West 2014).

²⁴⁸ Jeffrey D. Zients, Deputy Director for Management, OMB, M-12-21, *Addendum to OMB Memorandum M-98-13 on Federal Use of Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs)*, (2012), available at <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-21.pdf>.

in an actual structure,” utility-scale and “off-site” sources are expressly prohibited as contrary to the “energy savings” purpose of the statute.²⁴⁹

Second, a Secretary of a military department may use the authority of 10 U.S.C. 2922a (formerly 10 U.S.C. 2394) to purchase fuel or energy- including the creation and operation of energy producing facilities- for military installations for up to 30 years.²⁵⁰ However, it bears mentioning that in order for a Secretary of a military department to use the 10 U.S.C. 2922a authority, the contract must first be approved by the Secretary of Defense or his designee.²⁵¹ Currently, this authority has been delegated to the Deputy Under Secretary of Defense (Installations and Environment).²⁵² Section 2922a may also have potential limits on the extent of its authority in regulated jurisdictions based on an overlap with Section 8093’s restrictions.²⁵³ However, it has thus far not been challenged in court and continues to be relied upon extensively by the military in establishing the long-term contracts necessary for renewable energy development.²⁵⁴ As a recent example, a 13.8-megawatt solar array project at Naval Air Weapons Station China Lake, Calif. used Section 2922a authority to competitively solicit a power purchase

²⁴⁹ *Id.*

²⁵⁰ FAR 41.201(d)(2)(ii) (2014); *See also* 10 U.S.C.A. § 2922a (West 2014).

²⁵¹ 10 U.S.C.A. § 2922a(b) (West 2014).

²⁵² Margaret P. Simmons, *Challenges with Renewable Energy Projects*, Federal Bar Association (November 14, 2013), <http://www.fedbar.org/Image-Library/Chapters/North-Alabama/2013-FBA-Acquisition-Symposium.aspx>.

²⁵³ See Maura Goldstein, *A Lean, Green Fighting Machine? Part I: The Regulatory Risk Posed by the Army’s Renewables Initiative*, Electric Energy T&D Magazine, March-April 2013, at 38.

²⁵⁴ *Id.*

agreement/contract with a private developer that would have otherwise been prohibited under the state's law governing the retail sale of electricity only by franchised utilities.

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Turning to the third listed exception, a Secretary of a military department is permitted to purchase electricity from a provider other than the state-approved utility when the state approved utility is “unwilling or unable to meet unusual standards for service reliability that are necessary for the purposes of national defense.”²⁵⁶

Within the twists and turns of this Constitutional, statutory, and regulatory guidance, renewable energy acquisitions and climate change implications are typically compartmentalized away from one another and dealt with individually. The next section will present options with supporting authorities and analogs in an attempt to bridge this gap and present a viable option for their implementation together.

VI. THE INCORPORATION OF THE SOCIAL COST OF CARBON INTO THE GOVERNMENT'S PROCUREMENT OF ELECTRICITY

While not providing specific direction regarding renewable energy and climate change directives, two presidential policies provide ample support for the idea that linking the SCC with acquisitions of electricity is the next logical policy step in the government's ongoing battle against climate change. These policies are Executive Order 13563 and Executive Order 13589.

²⁵⁵ See Jeremy S. Scholtes, *On Point for the Nation: Army and Renewable Energy*, 34 Energy L. J. 55, 100-101 (2013), citing Def. Cmty. 360, *China Lake Energy Project Opens Up Rush to the Sun (and Other Renewables)*, Assoc. of Def. Cmty. (Oct. 31, 2012), <http://www.defensecommunities.org/headlines/china-lake-energy-project-opens-up-rush-to-the-sun-and-other-renewables/#>.

²⁵⁶ FAR 41.201(d)(2)(iii) (2014).

First and foremost, in November 2013, President Obama issued Executive Order 13563 and entitled it “Preparing the United States for the Impacts of Climate Change.”

²⁵⁷ This policy captures many of the general policies of the “Climate Action Plan” with the purpose of implementing these policies. Of particular importance for the SCC and Federal Government acquisitions of electricity is the charge to the newly created “Council on Climate Preparedness and Resilience” under section 6(e)(iii) to “facilitate the integration of climate science in policies and planning of government agencies...” ²⁵⁸ The incorporation of the SCC into the Federal Government’s procurement of electricity would fit perfectly within this directive.

Second, in furtherance of the Congressional goal of maximizing “efficient and effective spending” President Obama issued Executive Order 13589, “Promoting Efficient Spending.” ²⁵⁹ Under this Order, the President targeted a 20% reduction in various agency administrative expenses “to ensure the Government is a good steward of taxpayer money.” ²⁶⁰ By incorporating the SCC into the government’s purchase of electricity, social justice “good steward” considerations of taxpayer dollars will also be maximized by ensuring the external costs that taxpayers will ultimately shoulder are considered in these purchases.

²⁵⁷ Exec. Order No. 13563, 78 Fed. Reg. 66819 (November 6, 2013).

²⁵⁸ *Id.* at 66823.

²⁵⁹ Exec. Order 13589, 76 Fed. Reg. 70863, 70683 (November 15, 2011); *See also* Jeffrey D. Zients, Acting Director, Executive Office of the President, Office of Management and Budget, *Memorandum to the Heads of Executive Departments and Agencies: Promoting Efficient Spending to Support Agency Operations* (May 11, 2012), <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-12.pdf>.

²⁶⁰ *Id.*

These policies display that not only is there the previously mentioned general political will to apply the SCC to the Federal Government's procurement of electricity, there are also specific policy directives that such an action could readily be implemented under. This section will analyze advantages and disadvantages of 3 potential options that could be used to implement these policies' directives by requiring carbon-producing power companies to finally internalize the external costs that society has inadvertently subsidized since the commercialization of electricity.

A. Permissive Encouragement of the Social Cost of Carbon
as a Contracting Evaluation Factor

The first option is for the President to simply encourage the use of the SCC as an evaluation factor in the procurement of electricity as a clarification of earlier issued guidance, beyond simple consideration of the amount of GHG emissions. This would not need require any statutory, or regulatory changes and could simply involve amending an existing executive order, issuing a new one, or issuing a Presidential guidance memo (such as one issued in December of 2013²⁶¹) that encourages agencies to use the SCC as an evaluation factor in negotiated competitive procurements for electricity. As discussed in the previously mentioned "Guide to Purchasing Green Power"²⁶² and GSA's guidance document, "Executive Order 13514, Section 13: Recommendations for Vendor and Contractor Emissions,"²⁶³ there is an inherent authority within the existing regulations

²⁶¹ Federal Leadership on Energy Management: Memorandum for the Heads of Executive Departments and Agencies, 78 Fed. Reg. 75209.

²⁶² DoE, FEMP, *Green Power Guide*, *supra* note 94, at 45-46.

²⁶³ GSA, *Vendor Emissions*, *supra* note 88, at 38.

governing competitively negotiated “best value” procurements to consider environmental factors, such as the SCC, as evaluation criteria.

In particular, GSA’s “Executive Order 13514, Section 13: Recommendations for Vendor and Contractor Emissions” provides exceptionally relevant guidance. This Guidance came about in April 2010 as Executive Order 13514, Section 13, directed GSA to create direction regarding the consideration of GHG emissions by contractors for “scope 3” emissions- those “related to the supply of products and services to the Government.”²⁶⁴ While “scope 3” emissions are generated indirectly by the secondary company providing the raw materials or services used by the primary, the emissions are counted in the aggregate GHG emissions of the primary company as a required part of their ultimate delivery of the goods or services. As an example, a primary company contracted to provide a jet to the government would be required to count the GHG emissions produced by a secondary company in supplying the primary company with polished metal used in the jet’s construction.

While unrelated to direct agency electricity emissions considerations (covered under “scope 1 and 2” emissions) that the SCC recommendations of this paper contemplate, a portion of the “scope 3” guidance that GSA prepared is directly analogous to the purchasing considerations that could be applied to the government’s competitive procurement of electricity. Specifically, GSA’s Guidance document of April, 2010 was directed by Executive Order 13514 to explore the feasibility of “using Federal Government purchasing preferences or other incentives for products manufactured using

²⁶⁴ Exec. Order 13514, 74 Fed. Reg. at 52124.

processes that minimize greenhouse gas emissions.”²⁶⁵ In doing so, GSA’s Guidance identifies that the Federal Government’s purpose in promoting efficiency in federal procurements was not solely related to reducing the actual amount of time the contracting process takes, but could also be used to make the Government more environmentally efficient by “promoting sustainability” through GHG reductions.²⁶⁶ The report found that implementing Federal Government purchasing preferences would be feasible, but would be ineffective until a “sufficient number of suppliers” start tracking and providing their emissions data in a manner that is easily accessible by the government’s acquisition professionals.²⁶⁷

However, instead of employing purchasing preferences that may not be immediately implementable, GSA recommended using GHG emissions as an evaluation factor in awards to allow agencies the “discretion to trade the price of a given procurement against the GHG emissions associated with that procurement and thereby enable reduction in agency scope 3 GHG emissions through the acquisition system.” This would help to alleviate some of the uncertainty associated with purchasing preferences.

In its discussion on the implementation of GHG evaluation criteria in solicitations, the memo identified that while FAR Part 15 (the section that deals with negotiated procurements) does not specifically address environmental factors, 48 CFR 15.304 (2012) of the FAR allows agencies to tailor evaluation factors to the acquisition.

²⁶⁵ *Id.*

²⁶⁶ GSA, *Vendor Emissions*, *supra* note 88, at 6.

²⁶⁷ *Id.* at 35.

²⁶⁸ Further, the Guidance discussed that in passing section 15.304, the review team had previously removed “environmental objectives” to focus on efficiencies reducing evaluation time, however this in no way limited agency officials ability to voluntarily implement GHG emissions/sustainability criteria. ²⁶⁹

However, the Guidance cited to a Carbon Disclosure Project supply chain survey that indicated only 11% of the respondent-suppliers had voluntarily implemented a procurement preference for lower GHG emitting sources and began tracking this data. ²⁷⁰ This raised the chicken or the egg dilemma, as the GHG evaluation factor cannot be successfully implemented until the Government’s vendors begin to effectively track and report their GHG emissions information. ²⁷¹ Even beyond internal corporate GHG tracking, in order to be implemented effectively, the government also needs a consistent quality assurance method of verifying the GHG information. ²⁷²

Consequently, GSA recommended widening the scope of acquisition evaluations beyond a mere focus on efficiency in contract processing times to consider “efficiencies contained within the result the process produces,” such as reductions in emissions. ²⁷³ The Guidance identified that this could be accomplished by adding a mandatory

²⁶⁸ *Id.* at 36.

²⁶⁹ *Id.* at 36, 38.

²⁷⁰ *Id.* at 37 (*citing* Carbon Disclosure Project, *Supply Chain Report*, 9 (2010), https://www.cdp.net/CDPResults/CDP-Supply-Chain-Report_2010.pdf).

²⁷¹ *Id.* at 37.

²⁷² *Id.* at 10, 55.

²⁷³ *Id.* at 36.

sustainability-based evaluation factor that would lead to a “more efficient Government” overall.²⁷⁴ This factor could be based upon the tried-and-true past performance evaluation model, where agencies are permitted to pay a higher price for an offer that has better past performance, where lesser GHG emissions replaces better past performance.²⁷⁵ GHG emission reviews would also borrow the same evaluation system as past performance, where vendors with no GHG emissions data are rated as “neither favorable nor unfavorable,” but if “all other factors (are) equal, the supplier that does have the ‘GHG emissions inventory completed’ box checked would be awarded the contract.”²⁷⁶ This would serve to incentivize companies to track and report the GHG data, while protecting the interests of companies that may not be able to afford tracking (such as small businesses) by preventing their elimination as would happen if the criteria were imposed as a “responsibility” or “all-or-nothing selection criterion.”²⁷⁷ Finally, use of this criterion would improve agencies ability to assess vendor risk based upon energy price fluctuations associated with vendor’s GHG emitting energy use, as vendors with higher emissions will have increased dependence on the carbon-producing energy resource’s pricing.²⁷⁸

²⁷⁴ *Id.*

²⁷⁵ *Id.* at 38 (*citing USA Elecs.*, Comp. Gen. Dec. B-275389, 97-1 CPD § 75 (1997), where it was found acceptable for an agency to pay a higher price for a proposal with higher ranked past performance).

²⁷⁶ *Id.* at 38-39.

²⁷⁷ *Id.* at 39.

²⁷⁸ *Id.*

As part of this development process, in order to ensure “fair and reasonable comparative evaluations,” the Government would work to develop “sector-specific elements” that could be used to evaluate GHG emissions, similar to the criteria used to evaluate past performance under 48 CFR 42.1501, such as “history of cooperative behavior and customer satisfaction.”²⁷⁹ GSA recommended a phase-in approach, whereby vendors initially provide scope 1 GHGs (internal emissions from energy for production) and scope 2 GHGs (external emissions from purchased energy for production) emissions data over a two-year period, while amending the FAR to include any necessary mandatory evaluation criteria for GHG emissions and implementing the provision addressing the training of personnel. Generally, in phase II, the GHG evaluation criteria would continue to be honed for acquisitions, but would also begin incorporating scope 3 (emissions from suppliers) emissions data in vendor’s GHG reports over a 4-year period.²⁸⁰

In effectively using this same overall authority based upon the FAR’s definition of a “best value” procurement, which occurs when “the expected outcome of an acquisition that, in the Government’s estimation, provides the greatest overall benefit in response to the requirement,” the SCC could be included as an evaluation factor of electricity procurements.²⁸¹ As previously mentioned, while environmental factors are not specifically discussed under best value negotiated procurements in FAR Part 15, the section allows agencies to consider evaluation factors “tailored to the acquisition” that

²⁷⁹ *Id.* at 41.

²⁸⁰ *Id.* at 49-57.

²⁸¹ FAR 2.101 (2014).

“represent key areas of importance and emphasis to be considered in the source selection.”²⁸² This provision affords significant discretion to agencies in determining what evaluation factors are most suitable to assess the “best value” for purposes of each procurement. As an example, the EPA has exercised this discretion in its acquisition regulation supplement in mandating the consideration of environmental performance factors in procurements for “meeting and conference services” and requires the inclusion of a clause that provides 14 questions for use in assessing environmental preferability.²⁸³

The upside with this approach is that it allows agencies to independently determine when to apply the factor based upon their unique and differing circumstances. This option presents maximum flexibility for agencies in their pursuit of mission accomplishment. However, this maximum mission flexibility comes with a price. Based upon the current “belt-tightening” fiscal environment, agencies are simply not likely to voluntarily apply any additional evaluation factor to solicitations that is likely to lead to an increased expenditure of funds, regardless of any social justice equities that may result. As displayed in a Carbon Disclosure Project survey assessing the voluntary inclusion of GHG emissions as an evaluation factor, only 11% of survey entities had been using it, and only 31% of entities planned to start using it within the next 5 years.²⁸⁴

²⁸² FAR 15.304 (2014).

²⁸³ EPAAR Prescription and Solicitation Provision—EPA Green Meetings and Conferences, 72 Fed. Reg. 18401 (April 12, 2007) (to be codified at 48 C.F.R. pts. 1523 and 1552).

²⁸⁴ Carbon Disclosure Project, *Supply Chain Report 2010*, 9 (2010), https://www.cdp.net/CDPResults/CDP-Supply-Chain-Report_2010.pdf.

Thus, as additional non-mandatory guidance encouraging agencies to use existing procurement authorities to consider the SCC appears unlikely to lead to any changes, additional options should be considered.

B. Carbon Excise Tax

The next option is to apply a carbon “excise tax” to the Government’s purchase of all electricity produced with a carbon dioxide byproduct. As a tax, it will require congressional approval as the Constitution designates the power of taxation to Congress under Article I, Section 8, Clause 1. The carbon excise tax could be applied in the same fashion as section 301 of the James Zadroga 9/11 Health and Compensation Act of 2010 (Zadroga Act), Pub. L. 111-347, where a 2 percent excise tax is imposed on federal procurement payments made to foreign persons for goods manufactured or services provided in a country that is “not a party to an international procurement agreement with the United States.” For purposes here, the carbon tax would be applied to the electricity price using the SCC for the associated level of carbon produced per kw/h. Additionally, as with the Zadroga Act, the tax would be made an unallowable expense under FAR 31.205-41 in the event a cost reimbursement contract was used to purchase the electricity to prevent subsidization from occurring in an alternative manner.²⁸⁵

The excise tax revenue could be applied to the development of some activity for the greater good of society, such as alternative energy research, subsidies, etc., to compensate for the harm imposed by the electricity generation. Essentially the sky is the limit in terms of how the funds could be used, but the important point is that it would

²⁸⁵ Federal Acquisition Regulation; Unallowability of Costs Associated With Foreign Contractor Excise Tax, 78 Fed. Reg. 6189 (Jan. 29, 2013) (to be codified at 48 C.F.R. pts. 31 and 52).

finally realize the social justice goal of causing companies to internalize the external social costs associated with their generation of electricity.

However, this notion of a carbon tax is not limited to the federal procurement system and has been consistently suggested as a potential option on a national level for all electricity.²⁸⁶ In fact, a recent creative carbon tax bill proposed by Senators Bernie Sanders and Barbara Boxer involved the implementation of a tax on each ton of carbon produced that would partially fund a monthly credit/dividend to be returned to all taxpayers each month.²⁸⁷ However, this bill²⁸⁸ and another like it²⁸⁹ have not been able to get much traction. In fact, even the mere mention of a carbon tax draws out the saber-rattling opposition so strongly that it is toxic for political longevity at best²⁹⁰ and political suicide at worst.²⁹¹ One need look no further than Australia to see the political carnage

²⁸⁶ See generally Reuven S. Avi-Yonah & David M. Uhlmann, *Combating Global Climate Change: Why a Carbon Tax IS a Better Response to Global Warming Than Cap and Trade*, 28 Stan. Envtl. L.J. 3 (2009).

²⁸⁷ Climate Protection Act of 2013, S. 332, 113th CONG. § 1 (2013) (Bill was introduced by Senator Sanders and referred to committee, where it remains); See also M. Rhead Enion, *Sanders/Boxer carbon tax*, Legal Planet (February 14, 2013), <http://legal-planet.org/2013/02/14/sandersboxers-carbon-tax/>.

²⁸⁸ *Id.*

²⁸⁹ 159 CONG. REC. S2270 (daily ed. March 22, 2013) (statement of Sen. Whitehouse); See also Jon Healey, *Carbon tax? No thanks, says Senate*, Los Angeles Times (March 25, 2013), available at <http://articles.latimes.com/2013/mar/25/news/la-ol-senate-budget-resolution-carbon-tax-20130325>.

²⁹⁰ Enion, *supra* note 287.

²⁹¹ Shi-Ling Hsu, *The Case for a Carbon Tax: Getting Past Our Hang-Ups to Effective Climate Policy* 138 (Island Press 2011).

that a carbon tax can reap on a political career, where their first female Prime Minister, Julia Gillard, was ultimately ousted after she attempted to implement a carbon tax.²⁹²

As a result of the current political climate and continuing lack of bipartisanship decision-making,²⁹³ any proposed carbon tax is likely to fail.²⁹⁴ Accordingly, as with the first option discussed, due to the limited feasibility of this option, an additional avenue should be explored.

C. Social Cost of Carbon Differential Price Evaluation Adjustment

The third option would apply a price evaluation adjustment based upon the difference between the amount of GHG per kw/h produced by the highest GHG producing generator and the amount of GHG per kw/h produced by the lower GHG producers, using the SCC to monetize the social cost difference and downwardly adjust the pricing.

²⁹² Brad Plumer, *A Political Skirmish in Australia Could Have a Big Climate Impact*, The Washington Post, Wonkblog (June 26, 2013, 3:06 PM), <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/06/26/a-political-skirmish-in-australia-could-have-a-big-climate-impact/>.

²⁹³ J.D. Harrison, *Obama lauds small business owners in his State of the Union- but not all of them buy it*, The Washington Post (January 29, 2014) (describing public's concern that policies are unlikely to be passed because of the lack of bipartisanship in the Federal Government), available at http://www.washingtonpost.com/business/on-small-business/obama-lauds-small-business-owners-in-his-state-of-the-union--but-not-all-of-them-buy-it/2014/01/29/f724b462-885a-11e3-916e-e01534b1e132_story.html.

²⁹⁴ Susan Davis, *Democrats plan all-night 'talkathon' on climate change*, USA Today (March 9, 2013, 12:20 PM), available at <http://www.usatoday.com/story/news/politics/2014/03/09/senate-democrats-talkathon-climate-change/6172647/>.

The general authority for the President to exercise this option via executive order arguably lies within the Federal Property and Administrative Services Act.²⁹⁵ Under the Federal Property and Administrative Services Act, Congress statutorily delegated broad authorities to the President to create “policies and directives”²⁹⁶ to ensure the statutory purpose of providing an “economical and efficient system for... procuring...services...(and) management of public utility services...” is met.²⁹⁷

Although this authority is not unlimited, it is extremely broad and must simply be “exercised consistently with the structure and purposes of the statute” in a manner that does not violate other laws.²⁹⁸ However, in order for the President to effectuate an executive order into the FAR with binding effect, the updated procurement regulations must first be published in the Federal Register under 41 USC 1707 and an opportunity for public comment be provided.²⁹⁹ This is where the public participation and assessment of the public’s opinion regarding the application of the SCC to the Federal Government’s acquisitions of electricity can be performed. Using this analog, the Federal Government could lawfully require the incorporation of the SCC figure generated by the Interagency

²⁹⁵ Federal Property and Administrative Services Act of 1949, Pub. L. 152, Ch. 288, 63 Stat. 377 (codified as amended in scattered sections of 40 U.S.C. and 41 U.S.C.).

²⁹⁶ 40 U.S.C.A. § 121 (West 2014).

²⁹⁷ 40 U.S.C.A. § 101 (West 2014).

²⁹⁸ *Reich*, 74 F.3d at 1330, 1332.

²⁹⁹ 41 U.S.C.A. § 1707 (West 2014) (generally requires a 60 notice and comment period for the implementation of procurement policies involving the use of appropriated funds for policies with a “significant effect beyond the internal operating procedures of the agency issuing the procurement policy” or having a “significant cost or administrative impact on contractors or offerors”).

Working Group (after altering the figure-setting process to incorporate the public's comments into the rule-making, as necessary) be incorporated into the Federal Government's acquisitions of electricity.

Procedurally, implementation could follow the price evaluation adjustment system directed by 15 USC 657a(b)(3) and applied under FAR 19.307-8, where federal agencies are required to apply a 10% price evaluation adjustment to bids or offers submitted by large businesses when competing against certified HUBZone small businesses in unrestricted full and open competitions.

For SCC price evaluation adjustment purposes, the SCC could be applied in either a lowest price technically acceptable procurement or in the "best value" procurement previously mentioned above. Similar to the recent initiatives regarding specialized exclusions for carbon capture and sequestration technology, the standard could also incorporate exemptions for emission-capturing technology, cap-and-trade systems such as California,³⁰⁰ or any other circumstances not mentioned here that would be favored for exception.

One of the potential weaknesses of this proposal is that it will likely be limited in effect due to the Congressional determination under Section 8093 that the Federal Government is generally required to follow state laws regarding whether competition is permitted in the purchase of electricity. Accordingly, the mandatory application of a SCC price evaluation adjustment to the government's procurement of electricity will only

³⁰⁰ Assembly Bill 32, Global Warming Solutions Act, CALIFORNIA HEALTH AND SAFETY CODE § 38570 (2006); Article 5: California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms to Allow for the Use of Compliance Instruments Issued By Linked Jurisdictions, 17 C.C.R. 95801-96022 (2014).

have an impact when it is cost effective either in markets that have been deregulated (subject to previously mentioned exceptions), or where the state-franchised utility allows for customers to purchase from a renewable energy source at a premium. While residential customers have been slow to take advantage of retail electricity choices in deregulated competitive states, a majority of commercial and industrial producers have taken advantage of these opportunities.³⁰¹ Assuming competitive markets collectively begin to consistently drive electricity generation prices down so that pricing is less than the traditional non-competitive regulated states as has recently begun to occur,³⁰² there will likely be an uptick in the number of states that similarly become deregulated to take advantage of the potential cost savings. As this comes to fruition, the price evaluation adjustment will become increasingly more relevant and will allow the government to utilize its collective buying power to drive down the costs of renewable energy generating technologies while chipping away at the social justice inequities associated with carbon producing electricity.

The most obvious benefit in applying the SCC differential price evaluation adjustment would be to level the playing field by benefitting electricity generators emitting lower levels of GHG who will likely have incurred additional costs in implementing the more environmentally friendly technology. Additionally, it would serve to incentivize future investments and implementation of lower GHG emitting

³⁰¹ U.S. Energy Information Administration, *Today in Energy: State Electric Retail Choice Programs are Popular with Commercial and Industrial Customers* (May 14, 2012), http://www.eia.gov/todayinenergy/detail.cfm?id=6250#tabs_RenewablesMaps-1.

³⁰² See Tomich, *supra* note 217; Malewitz, *supra* note 217.

electricity generation technology, while deterring similar such investments in the higher GHG emitting generation technology.

However, the initial practical effect of this price evaluation adjustment will likely be minimal, due to a couple of different factors. First, the impact would be limited by the current estimates of the SCC. In fact, based upon the EPA's most recent "Emissions & Generation Resource Integrated Database (eGRID)" statistics, the US typically produces approximately 0.55 kilograms (or 0.00055 metric tons) of GHG emissions per kilowatt-hour.³⁰³ When this figure is applied to the current "middle-of-the road" estimate for the SCC of \$37, this amounts to a SCC of about 2 cents per kw/h. However, while by-and-large the application of the SCC will likely be inconsequential for the government's purchases of electricity for the immediate future, even now the SCC would have an immediate impact in some markets. For example, according to the EPA Green Power Partnership's Green Power Locator, in order to purchase wind power in San Antonio and El Paso, a premium of 1.0 cent/kwh and 1.92 cents/kwh would apply.³⁰⁴ Assuming the average GHG output for generators in these areas, upon application of the SCC the agencies purchasing electricity from these entities would immediately be required to switch their energy generation selection.

From a future cost impact standpoint, as it is anticipated that as GHGs cause global temperatures to continue to rise, the consequential damages will be increasingly

³⁰³ EPA, eGRID2012 Version 1.0, Year 2009 Summary Tables, Found at http://www.epa.gov/cleanenergy/documents/egridzip/eGRID2012V1_0_year09_SummaryTables.pdf.

³⁰⁴ EPA, Green Power Partnership, Green Power Locator, <http://www.epa.gov/greenpower/pubs/gplocator.htm> (last visited on May 14, 2014).

severe.³⁰⁵ Thus, as the value of the SCC proportionately increases in direct correlation with the increasing severity of damages, its preferential impact on renewable technologies will also correspondingly increase.

From a political perspective, this policy is also likely to involve the lowest expenditure of political capital and should be acceptable to both parties, as the associated increased taxpayer costs with selecting a renewable energy source over GHG producing ones are only likely to be significant when damages resulting from GHGs have become severe enough to have a level of tangibility with America's voting public to mobilize them at the polls. In the meantime, it buys GHG emitting electricity generators time to diversify/switch their electricity-generating technologies.

For the group who continues to reject climate change altogether, this option provides additional opportunity to continue the collection of data that either supports or refutes the idea that climate change is real with minimal initial consequences.

VII. CONCLUSION

The existing collection of laws, regulations, and policy guidance provide a solid foundation to support federal agencies use of renewable energy and reduce the Federal Government's overall carbon footprint. However, in neglecting to apply the SCC to federal acquisitions of electricity, the Federal Government is missing a crucial opportunity to institute social justice, ensure stewardship of taxpayer money, and provide additional opportunities to incentivize renewable energy. By adopting a SCC differential price evaluation adjustment, all of these goals can be achieved and the long-tilted electricity generation social justice equilibrium can finally begin its path to balance.

³⁰⁵ IPCC, *supra* note 4, at Synthesis Report, Chapter 5.

Ultimately the immediate impacts of a SCC differential price evaluation adjustment will likely be small, but these small impacts have a strong likelihood of eventually growing to become big impacts. Accordingly, there is no better time than the present to get the ball rolling in ironing out the details of a proper way to study and apply the SCC as a differential price evaluation adjustment for the procurement of electricity and beyond.