

FEDERAL “GREEN” PRODUCT PROCUREMENT POLICY
IN THE UNITED STATES

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INTRODUCTION

The U.S. federal government is reported to be the world’s largest purchaser,¹ which gives it the potential to wield its buying power to achieve ‘secondary’ policies such as protecting the environment and promoting the market for sustainable consumer products. This paper specifically addresses federal procurement of consumer products² and examines the degree to which agencies must purchase ‘green’ products that minimize upstream environmental impacts or otherwise have low “embedded” carbon. These policies are important because procurement preferences for sustainable goods can provide demand-side market incentives that may function as a catalyst to promote the development of green goods in the broader consumer market as a whole. Part I below first reviews the history of green product procurement in the U.S., the foundation for which was established by the policies of the Clinton and Bush Administrations, while Part II discusses how President Obama has expanded these sustainable purchasing requirements. Parts III and IV address the extent to which these current rules treat lifecycle analysis and/or otherwise account for upstream greenhouse gases or other impacts in the supply chain.

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¹ EPA, *Environmentally Preferable Purchasing*, found at: <http://www.epa.gov/epp/pubs/about/about.htm>. EPA reports that the US federal government is “one of the world’s largest consumers...[and] the single largest consumer of goods and services within the United States, with total spending estimated at \$350 billion for goods and services each year.” *Id.* It is also the largest consumer of energy in the nation. See Alliance to Save Energy, *Improving Federal Energy Management*, found at: <http://www.ase.org/resources/improving-federal-energy-management>.

² Examples of non-product procurement include energy procurement and building management. For instance, in 1988 the Federal Energy Management Improvement Act, Pub. L. 100-615, amended §543 of the National Energy Conservation Policy Act (NECPA) to require federal agencies to reduce energy consumption in federal buildings by 10% by 1995 and 20% by 2000, based on a 1985 baseline, and it also required other energy-efficiency provisions to reduce energy use in federal facilities. 42 U.S.C. § 8253. See also Energy Policy Act of 2005, Sec. 203, codified at 42 U.S.C. § 15852 (renewable energy purchasing targets).

I. HISTORY OF U.S. FEDERAL “GREEN PRODUCT PROCUREMENT”

A. Foundation for Today’s Green Purchasing Under the Clinton Administration

Federal procurement of “green” products began in earnest during the Clinton Administration when President Clinton issued Executive Order 12873³ in 1993 to promote recycling and environmental procurement.⁴ This policy envisaged a role for federal procurement to achieve secondary policy goals⁵ to facilitate a larger market for green products. The order directed that federal agencies should “increase and expand markets for recovered materials through greater Federal Government preference and demand for such products”⁶ and, more broadly, should encourage “environmentally preferable products and services [by] implement[ing] cost-effective procurement preference programs favoring [them].”⁷ In particular, the order (1) required agencies to align procurement policies with Section 6002 of the Resource Conservation and Recovery Act (RCRA) to use recycled products to the extent “practicable” and competitive,⁸ (2) directed EPA to establish Comprehensive Procurement Guidelines (CPG) for recycled content in products and (3) instructed federal agencies to adjust their procurement programs to comply with these EPA standards to the “maximum extent practicable.”⁹ These policies did not focus on greenhouse gases (GHGs), but they

³ Executive Order 12873, *Federal Acquisition, Recycling, and Waste Prevention*, 58 Fed. Reg. 2115 (October 20, 1993). The Administration followed with an expanded version in Executive Order 13101. Executive Order 13101, *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*, 63 Fed. Reg. 49643 (September 16, 1998). In addition, in 2000 President Clinton issued Executive Order 13148, *Greening the Government Through Leadership in Environmental Management*, 65 Fed. Reg. 24595 (April 26, 2000), and Executive Order 13149, *Greening the Government Through Federal Fleet and Transportation Efficiency*, 65 Fed. Reg. 24607 (April 26, 2000). EO 13148 “require[d] federal agencies to incorporate environmental management systems into agency day-to-day decision-making and long term planning processes[, with] Pollution Prevention [] highlighted as a key aspect.” EPA, *EPP - Executive Orders*, found at: <http://www.epa.gov/epp/pubs/guidance/executiveorders.htm>. President Bush later revoked the Clinton Administration orders in EO 13423. Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, Sec. 11, 72 Fed. Reg. 3919, 3923 (January 26, 2007).

⁴ Even before EO 12873, however, the 1990 Pollution Prevention Act, 42 U.S.C. §13101 et seq., required EPA to promote procurement of products that contributed to “source reduction.” See generally, *Federal Legislation, Regulation, and Executive Orders Relevant to Federal Electronics Stewardship* (June 28, 2012), found at: www2.epa.gov/sites/production/files/documents/fec_regs_0.pdf.

⁵ For a discussion of the Executive Branch’s authority to use procurement to address secondary policies such as mitigating climate change, see Center for Energy and Environmental Security (CEES), *The Boundaries of Executive Authority: Using Executive Orders to Implement Federal Climate Change Policy* (2008), pp. 127-138, found at:

www.climateactionproject.com/docs/Executive_CEES_PCAP_II_Report_Jul_17.pdf (concluding that the Procurement Act and prior case law support the President’s use of procurement policy to address climate change).

⁶ EO 12873, *supra* n. 3, at Sec. 101.

⁷ *Id.* at Sec. 102.

⁸ The order required recycled products to the extent “practicable...and consistent with maintaining a satisfactory level of competition.” *Id.* at Secs. 402(d), 502, and 504. See also Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6962 (c). This applied to items that had a purchase price of over \$10,000 (individually, or collectively over the proceeding year).

⁹ EO 12873, *supra* n. 3, at Secs. 503. The order required agencies to “modify their affirmative procurement programs to require that, to the maximum extent practicable, their purchases of products meet or exceed the

nevertheless established a broad preference for a range of “environmental preferable products” that could in theory encompass upstream supply chain impacts.

B. Green Product Procurement Policy During the Bush Administration

The Bush Administration later revoked President Clinton’s Executive Orders on procurement,¹⁰ but nevertheless replaced these with other key purchasing provisions. Initially these were piecemeal, but by 2007 President Bush had adopted a more comprehensive policy that had even identified greenhouse gas reductions as a goal. In 2001, the Administration first issued Executive Order 13212,¹¹ which required agencies to “increase the production, transmission or conservation of energy,” and from which the Federal Energy Commission developed best practices to promote federal purchases of EPA-designated energy efficient electronic equipment.¹² The Bush Administration later issued Executive Order 13221, further promoting energy efficiency by requiring federal agencies to purchase electronic products that contain no more than one watt of standby power.¹³

During this time, Congress also took actions to expand federal procurement of green products. First, it extended federal buying preference to bio-based products under a USDA program in the 2002 Farm Security and Rural Investment Act.¹⁴ Second, it adopted the Energy Policy Act of 2005 (EPACT), which in relevant part amended the National Energy Conservation Policy Act (NECPA) by adding a provision for the “Federal Procurement of Energy Efficient Products.”¹⁵ Although NECPA had previously contained a provision on procurement that had directed key agencies “to identify and designate those energy efficient products that offer significant potential savings,”¹⁶ that provision had only specified that such products be identified and *encouraged* in

EPA guideline standards.” *Id.* at 502 (2). The order also created the agency position of the “Federal Environmental Executive” and counterpart positions at each agency. *Id.* at Secs. 103, 301. *See* Council on Environmental Quality, Office of Federal Environmental Executive, found at: www.ofee.gov/. *See also* *EPP – Executive Orders*, *supra* n. 3.

¹⁰ EO 13423, *supra* n. 3.

¹¹ EO 13212, *Actions To Expedite Energy-Related Projects*, 66 Fed. Reg. 28357 (May 22, 2001).

¹² EPA, *Federal Legislation, Regulation, and Executive Orders Relevant to Federal Electronics Stewardship* (June 28, 2012) (“encourag[ing] the purchase of EPEAT-registered, ENERGY STAR qualified, and/or FEMP designated electronic equipment, and the enabling of power and resource management features on equipment in use”), found at: www2.epa.gov/sites/production/files/documents/fec_regs_0.pdf.

¹³ EO 13221, *Energy Efficient Standby Power Devices* (July 31, 2001). These provisions, later codified in the by the Energy Independence and Security Act of 2007 (EISA), require the agency to purchase products with these standby power specifications, if the product is available and cost-effective, as calculated over the agency’s ownership of the product.

¹⁴ FARM SECURITY AND RURAL INVESTMENT ACT OF 2002 (“FSRIA”), Title IX, § 9002, 7 U.S.C. § 8102, found at: <http://www.ers.usda.gov/Publications/AP/AP022/>.

¹⁵ ENERGY POLICY ACT OF 2005 (EPACT), Pub. L. 109-58, Sec. 104 (August 8, 2005). EPACT added Section 553 to NECPA, 42 U.S.C. § 8259 (b). *See also* 10 C.F.R. Part 436; *Federal Procurement of Energy Efficient Products*, Final Rule, 74 Fed. Reg. 10830 (March 13, 2009); FEMP website, found at: www1.eere.energy.gov/femp/regulations/epact2005.html.

¹⁶ 42 U.S.C. § 8262 g (b) (requiring steps from the General Services Administration (GSA), the Secretary of Defense and the Secretary of Energy).

procurement. The new legislation in EPACT went a step further, however, to *require* federal agencies to purchase products that had been designated as energy efficient by either the ENERGY STAR® program or the Federal Energy Management Program (FEMP).^{17,18} EPACT also included other important “greening” measures, such as (1) requiring a 20% reduction in energy use in federal buildings by 2015 compared to a 2003 baseline, (2) requiring a certain percentage of renewable energy in buildings owned by federal agencies (including a mandate of 20,000 solar PV systems at federal facilities by 2010) and (3) adding provisions regarding agency purchases of flex-fuel vehicles.¹⁹

The criteria set in EPACT and NECPA, while commendable, looked only to the energy efficiency of products over the agency’s *lifetime ownership* and did not assess the lifecycle cost of embodied carbon or other “upstream” emissions prior to the agency’s purchase of the product. For example, although NECPA refers to “life cycle costs,” this is defined as *operational* life, rather than taking a ‘cradle to grave’ approach. While it requires identifying “energy efficient products that offer significant potential savings, using, to the extent practicable, *the life cycle costs methods and procedures* developed under section 8254,”²⁰ this referenced provision only takes into account “the sum of all *capital and operating expenses* associated with the energy system of the building involved over the expected life of such system...”²¹ The Energy Star and FEMP programs likewise take an operational view, identifying the top 25% of products in a given category, based on certain efficiency and other criteria that make the product more energy efficient than others, as calculated over the life of the *end-user’s ownership* of the product.²² Thus these policies did not account for upstream GHG emissions and instead

¹⁷ 42 U.S.C. § 8259 b. This provision also requires federal agencies to factor these standards into their procurement specifications. *See also Federal Acquisition Regulation, FAR Case 2006–008, Implementation of Section 104 of the Energy Policy Act of 2005*, Final Rule, 72 Fed. Reg. 65868 (November 23, 2007) (amending 48 C.F.R. Pts. 2, 22, 23, 36, and 52). The EPACT 2005 requirement for federal agencies to purchase energy efficient equipment was reiterated in Section 525 of the Energy Independence and Security Act of 2007. For a summary of relevant statutes and executive orders, *see EPP – Executive Orders, supra* n. 3.

¹⁸ The statute provides exceptions where: the product is not cost effective over the life of the agency’s use, no product has been designated by ENERGY STAR® or FEMP, is not otherwise functional for the agency, or is for use in combat-related programs. 42 U.S.C. § 8259 (b)(2) and (b)(5).

¹⁹ *See* EPACT, *supra* n. 15, at §§ 102, 203, 204, and 701, amending NECPA, 42 U.S.C. § 8253(a)(1).

²⁰ 42 U.S.C. § 8286 (g) (emphasis added).

²¹ In full, the provision calculates this as “the sum of all *capital and operating expenses* associated with the energy system of the building involved over the expected life of such system or during a period of 40 years, whichever is shorter, and using average fuel costs and a discount rate determined by the Secretary.” 42 U.S.C. § 8254 (emphasis added).

²² EPACT also amended NECPA to provide that FEMP-certified products are “among the highest 25 percent of equivalent products for energy efficiency.” 42 U.S.C. § 8259 b(a)(4). The voluntary ENERGY STAR® program, codified at 42 U.S.C. § 6294(a), does not specify particular energy efficiency measures for products to receive certification, but program guidelines target “selecting efficiency levels reflective of the top 25% of models available on the market when the specification goes into effect.” *ENERGY STAR® Products Program*, p. 2 (May 2012), found at: www.energystar.gov/ia/partners/prod_development/downloads/ENERGY_STAR_Strategic_Vision_and_Guiding_Principles.pdf?d5fd-483d. Strategic Vision and Guiding Principles. ENERGY STAR® now also labels housing. Under new 2012 voluntary standards, Energy Star-labeled homes “are at least 15% more efficient than those built to the 2009 International Energy Conservation Code (IECC), and include

only considered the product's direct costs associated with the agency's acquisition and operational use.

In 2007, President Bush developed a more comprehensive sustainability policy in Executive Order 13423, which remains largely in place today.²³ The order is first notable in that it does not simply require federal facilities to meet energy intensity targets in order to reduce agency expenses, but moreover does so for the express purpose of “reduc[ing] greenhouse gas emissions.”²⁴ Further, it establishes an overarching federal policy for agencies to operate in a “sustainable manner,”²⁵ which it defines broadly as,

“...to create and maintain conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations of Americans.”²⁶

The order also sets forth several specific procurement targets. First, as to energy use in federal facilities, the order requires agencies to reduce energy use in federal buildings²⁷ “by (i) 3 percent annually through the end of fiscal year 2015, or (ii) 30 percent by the end of fiscal year 2015, relative to [a 2003] baseline.”^{28,29} The targets

additional energy-saving features to deliver a performance advantage of up to 30% compared to typical new homes.” See program website, found at: http://www.energystar.gov/index.cfm?c=about.ab_index.

²³ EO 13423, *supra* n. 3.

²⁴ *Id.* at Section 2(a).

²⁵ Section 1 of EO 13423 states:

“It is the policy of the United States that Federal agencies conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically, and fiscally sound, integrated, continuously improving, efficient, and sustainable manner.” *Id.*

²⁶ *Id.* at Section 7(k).

²⁷ EO 13423 does not refer directly to federal buildings, but elsewhere the order defines that “‘energy intensity’ means energy consumption per square foot of building space.” EO 13423, *supra* n. 4, at Sec. 9 (i). Further, these requirements were later incorporated into the Energy Security and Independence Act of 2007 (EISA). ENERGY SECURITY AND INDEPENDENCE ACT OF 2007 (EISA), Pub. L. 110-140, §§ 431-39 (amending (in relevant part) Section 543(a)(1) of NECPA, 42 U.S.C. § 8253). As to procurement, EISA: (1) codified the Administration’s earlier order on standby power specifications, (2) reinforced procurement requirements for products designated as energy efficient by ENERGY STAR® and FEMP, and (3) prohibited agencies from buying incandescent light bulbs for certain facilities. *Id.* at §§ 522 (light bulbs at Coast Guard facilities), 524 (standby energy), and 525 (energy efficient products). Separately, EISA amended NECPA to strengthen energy conservation standards for certain consumer products (such as dishwashers, washing machines, lighting) and for commercial and industrial equipment. See 10 C.F.R. Part 430 (consumer products) and Part 431 (commercial and industrial equipment); see also DOE, Energy Conservation Standards for Certain Consumer Products and Commercial and Industrial Equipment, Final Rule, 74 Fed. Reg. 12058 (March 23, 2009) (publishing EISA standards).

²⁸ EO 13423, *supra* n. 3. Also as to federal facilities, the order requires “that (i) new construction and major renovations of agency buildings comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*...and (ii) 15 percent of the existing Federal capital asset building inventory of the agency as of the end of fiscal year 2015 incorporates the sustainable practices in the *Guiding Principles*.” *Id.* at Section 2(f).

²⁹ The order also requires federal agencies to (1) attain specified targets to reduce water consumption intensity, (2) reduce the use of toxic and hazardous chemicals, and (3) “maintain cost effective waste prevention and recycling programs.” *Id.* at Secs. 2(c) and 2(e).

exceed a previous requirement in EPACT 2005 that required federal facilities to reduce energy use by 20% by the end of 2015.³⁰ Second, towards accomplishing this the order sets renewable energy targets and further specifies that at least half of these targets must be met by new sources of renewable energy, preferably onsite.³¹ Third, to reduce vehicle fuel use, the order requires that each agency must reduce petroleum use in its vehicle fleet by two percent annually and increase by ten percent annually the use of non-petroleum fuel sources.³² Agencies must also purchase plug-in hybrid vehicles, but only when “commercially available at a cost reasonably comparable, on the basis of [ownership] life-cycle cost to [conventional] vehicles.”³³

On the specific issue of *product* procurement, the order requires agencies to purchase paper made with 30 percent recycled content³⁴ and to satisfy 95 percent of their electronic equipment requirements with products with the “EPEAT” voluntary certification of environmental impacts.³⁵ More importantly, it sets forth a broad mandate for green product procurement, stating:

“Each agency shall...require[] in agency acquisitions of goods and services[:] use of sustainable environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products.”³⁶

To implement this mandate the Office of the Federal Environmental Executive (OFEE) published its *Instructions for Implementing Executing Order 13423*,³⁷ which direct agencies to procure green products in a number of categories and require that:

“[e]ach agency shall give preference in their procurement and acquisition programs to the purchase of products that are more ‘environmentally friendly,’ such as those that contain recycled content, are Energy Star® labeled, are water-efficient and/or energy-efficient, are ‘bio-based,’ and do not contain toxic materials or ozone-depleting substances.”³⁸

³⁰ EPACT, *supra* n. 15, at §102 (amending 42 U.S.C. § 8253 (a)(1)).

³¹ EO 13423, *supra* n. 3 (emphasis added).

³² *Id.* EISA, however, limited federal agencies from buying synfuel whose life-cycle GHG emissions are more than those for petroleum fuels. EISA, *supra* n. 32, at § 525.

³³ EO 13423, *supra* n. 3, at Sec. 2(g).

³⁴ *Id.*

³⁵ *Id.* at Sec. 2(h). “EPEAT” stands for “Electronic Product Environmental Assessment Tool.”

³⁶ *Id.* at Sec. 2(d).

³⁷ Office of the Federal Environmental Executive, *Instructions for Implementing Executive Order 13423*, pp. 15-16 (March 29, 2007) (“Instructions”), found at: http://www.whitehouse.gov/sites/default/files/omb/procurement/green/eo13423_instructions.pdf. See also *Notice of Availability of E.O. 13423 Implementing Instructions*, 72 Fed. Reg. 33504 (June 18, 2007) (referencing OFEE Instructions at www.ofee.gov).

³⁸ *Id.* EPA’s *Comprehensive Procurement Guidelines* for recycled products were authorized by the Solid Waste Disposal Act, Section 6002 of the Resource Conservation and Recovery Act (RCRA). EPA has guidelines for eight categories of products: Construction, Landscaping, Nonpaper Office, Paper/paper products, Parks and Recreation, Transportation, Vehicular, and a catchall “miscellaneous,” found at:

These green product procurement policies are still in force today and have been expanded upon by President Obama.

II. GREEN PROCUREMENT UNDER PRESIDENT OBAMA’S EXECUTIVE ORDER 13514

President Obama substantially broadened the mandate to address greenhouse gas emissions in federal operations in his 2009 Executive Order 13514, which sets forth numerous environmental goals ranging from reducing toxic chemicals to promoting integrated energy planning.³⁹ The order contains the widest mandate yet for “green” procurement, requiring federal agencies to increase energy efficiency, conserve water, and reduce waste in operations and supply chains through federal procurement and building management. The policy builds on previous federal actions that promoted ‘secondary’ environmental goals⁴⁰ through government procurement, and it establishes an overarching federal aim to “leverage agency acquisition to foster markets for sustainable technologies and environmentally preferable materials, products, and services” through “a full accounting of both economic and social benefits and costs.”⁴¹

Most notable on the instant issue of procurement of products, the order requires federal agencies to “ensure that 95 percent of new contract actions...for products and services...are energy-efficient”⁴² and/or are otherwise environmentally preferable. Previous legislative and/or administrative guidelines had applied the 95 percent figure only to electronic or other limited categories, such as those designated as preferable by the EPEAT, Energy Start, and/or FEMP voluntary certification programs.⁴³ The 2009 order goes beyond this, however, to facially apply to virtually *all* new contracts for products and services.⁴⁴ It states:

www.epa.gov/epawaste/conservetools/cpg/products/index.htm. For “bio-preferred” products, see USDA’s labeling program, found at: <http://www.biopreferred.gov/Labeling.aspx>.

³⁹ EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, Sec. 1, 74 Fed. Reg. 52117 (October 8, 2009). The order requires:

“[a](i) reducing energy intensity in agency buildings;...(ii) increasing agency use of renewable energy and implementing renewable energy generation projects on agency property; ... (iii) reducing the use of fossil fuels [through fleet management];...(d) improv[ing] water use efficiency...(e) promot[ing] pollution prevention and eliminate waste[;]...(f) advanc[ing] regional and local integrated [energy] planning[;]...(g) implement[ing] high performance sustainable Federal building design, construction, operation and management[;]...(h) advanc[ing] sustainable acquisition[;]...[and] (i) promot[ing] electronics stewardship.”

Id. at Sec. 2.

⁴⁰ See CEES, *supra* n. 5, for discussion of the authority of the Executive Branch’s use of procurement for secondary policy purposes.

⁴¹ EO 13514, *supra* n. 39, at Sec. 1.

⁴² *Id.* at Sec. 2(h).

⁴³ By comparison, President Bush’s EO 13423 required 95% of electronics to be registered with EPEAT.

⁴⁴ EO 13514, *supra* n. 39, at Sec. 2(h). This includes ‘task and delivery orders’ but excludes contracts for weapon systems. *Id.* The Federal Acquisition Regulations (FAR) have been amended with an Interim Rule to reflect the EO. See 48 C.F.R. Pt. 23.1 (Sustainable Acquisition Policy). See also FAR Case 2010-001, Interim Rule, 76 Fed. Reg. 31395 (May 31, 2011); FAR Case 2010-004, Interim Rule, 76 Fed. Reg. 41179 (July 13, 2011) (bio-based product preference).

“...[Federal agencies must] ensure that 95 percent of new contract actions ...for products and services...are energy-efficient (Energy Star or Federal Energy Management (FEMP) designated), water-efficient, biobased, environmentally preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT) certified), non-ozone depleting, contain recycled content, or are non-toxic or less-toxic alternatives, where such products and services meet agency performance requirements.”⁴⁵

Two aspects of this 95 percent requirement warrant clarification. First, it does not delineate how the product’s environmental characteristics should be prioritized—i.e., how to choose between a product that is bio-based, but not water-efficient, or vice versa. Of course, in many instances there will not be any overlap since, for example, office IT equipment do not need water efficiency standards. A more common scenario, however, might be one in which an electronics product is designated as ENERGY STAR® as to energy efficiency, but is not otherwise registered with EPEAT regarding a range of other environmental characteristics. While the order is silent on this, ideally procurement managers should balance *all* the factors and attributes of a product, to identify products in each category that best comport with the policy of EO 13514 by maximizing the environmental attributes.⁴⁶ In other words, the spirit of the order likely warrants agencies choosing products that are not simply ENERGY STAR® rated, but, rather, products that maximize environmental sustainability by being energy efficient *and* non-toxic *and* non-ozone depleting, if available.

Second, the provision in the order that refers to products that are “environmentally preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT) certified,” should apply not *just* to electronics products (i.e., those to which ‘EPEAT certification’ applies), but to *all* products. Although the “EPEAT” certification only applies to electronics, the reference here to the EPEAT should not limit ‘environmentally preferable’ products to only those within the electronics category to which the EPEAT label applies. Presumably President Obama intended the 2009 order to be *at least as* stringent as President Bush’s 2007 EO 13423, and the guidance issued for the Bush Administration order requires agencies to procure “[e]nvironmentally preferable

⁴⁵ *Id.*

⁴⁶ EPA’s 2000 *Guidance on Environmentally Preferable Purchasing* suggests that agencies *may* look to only one attribute, though it is preferable for the agency to assess multiple environmental qualities:

“Environmental preferability should also reflect the consideration of *multiple environmental attributes* such as increased energy efficiency, reduced toxicity, or reduced impacts on fragile ecosystems *at each phase in the life cycle*. Although the determination of environmental preferability should be based on multiple environmental attributes examined from a life cycle perspective, purchasing decisions can be made based on a single environmental attribute such as recycled content or energy efficiency when that attribute is the strongest distinguishing characteristic of a product’s or service’s environmental preferability.”

EPA, *Environmentally Preferable Products Final Guidance Brochure* (June 2000) (emphasis added), found at: <http://www.epa.gov/epp/pubs/eppbro.htm>.

products and services, *including* EPEAT-registered electronic products.”⁴⁷ Thus, the reference in the order to products with the ‘EPEAT’ designation should be viewed simply as an *example* of an “environmentally preferable” category, rather than a restriction that limits this mandate only to the category of electronics. Instead, the reference to “environmentally preferable” should operate as a “catch-all” to give preference to the full range of environmental attributes that do not otherwise fall within the other enumerated categories of energy or water efficiency, containing non-ozone depleting substances or recycled material, etc.

III. AUTHORITY TO INCORPORATE LIFECYCLE AND SUPPLY CHAIN ANALYSIS OF EMBEDDED CARBON INTO FEDERAL PURCHASING DECISIONS

President Obama’s mandate for agencies to achieve 95 percent green procurement could potentially incorporate supply-chain environmental factors and/or GHG intensity. While the order does not state this explicitly, the blanket reference to “environmentally preferable” products is wide enough to do so, given guidance documents that define this term broadly. Though this guidance derives from the *Instructions for Implementing Executive Order 13423* (“*Instructions*”), which were issued in connection with President Bush’s earlier order, that order is still in force and thus the definition in its accompanying instructions should still be operative.

This definition includes upstream, full “life cycle” environmental impacts, as stated in the Instructions:

“ ‘*Environmentally preferable*’ means products or services 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. This comparison *may consider raw materials acquisition, product [] manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.*”⁴⁸

These *Instructions* further direct that “[e]ach agency shall purchase...[such] services, using EPA’s *Guidance on the Acquisition of Environmentally Preferable Products and*

⁴⁷ Instructions, *supra* n. 37 (emphasis added). The 2007 order only applied the 95 percent figure to electronics products.

⁴⁸ *Id.* at p. 36 (emphasis added). This definition incorporates the broad, supply-chain focus definitions used for President Clinton’s former EO 13101, even though that order had been revoked by President Bush in 2007. Further, the Instructions incorporate environmental management principles from the International Standards Organization (ISO), which is one of the recognized international standard-setting bodies. The *Instructions* state:

“EO 13423 directs Federal agencies to implement environmental management systems (EMS) at all organizational levels,” and define EMS as “reflect[ing] accepted quality management principles based on the “Plan, Do, Check, Act,” model found in the ISO 14000:2004(E) International Standard and using a standard process to identify and prioritize current activities, establish goals, implement plans to meet the goals, evaluate progress, and make improvements to ensure continual improvement.” *Id.*

Services,”⁴⁹ which allows agencies to consider upstream environmental impacts in the product supply chain under “Principle Three” and directs agencies to “examine multiple environmental attributes throughout a product’s or service’s life cycle.”⁵⁰ Serving as the basis for the terminology used later in the Bush Administration’s 2007 *Instructions*, this *Guidance* states that the determination of which products are “environmentally preferable” involves a full lifecycle analysis. As the *Guidance* states:

“EPA encourages purchasers to select products and services with as few adverse environmental impacts *in as many life cycle stages as possible*. A product’s life cycle includes activities associated with raw material acquisition, manufacturing, packaging and transportation, product use, and ultimate disposal.”⁵¹

Despite this broadly inclusive, life cycle definition of ‘environmentally preferable,’ which *allows* agencies to take into account upstream, embodied GHG emissions, President Obama’s 2009 Executive Order does not explicitly *require* agencies to do so. Moreover, the broad wording of the order in this regard may likely provide insufficient guidance to agencies as to how to agencies should identify or rank ‘environmentally preferable products.’ For this reason, it is unclear what impact the order will ultimately have on spurring federal purchasing of green products, and of low-carbon products in particular.

⁴⁹ *Id.* at p. 16 (emphasis added). EPA’s guidelines for environmentally preferred products can be found at: <http://www.epa.gov/epp/pubs/guidance/guidancepage.htm>, and information on particular products or categories can be accessed at: <http://www.epa.gov/epp/pubs/products/products.htm>. The program began in 1993. The Guidance dates back to 2000 and is based on principles derived in large part from President Clinton’s EO 13101. See www.epa.gov/epp/pubs/about/about.htm.

⁵⁰ EPA EPP Guidance, *supra* n. 46.

⁵¹ *Id.* (emphasis added). The *Guidance* qualifies this somewhat, however, by stating that:

...When examining the life cycle of a service, particular emphasis is placed on the use phase of the products required to provide the service, although *the entire life cycle of the products being used should be examined carefully*. To determine environmental preferability, *EPA suggests purchasers compare the severity of environmental impacts throughout the life cycle of the product or service with those of competing products and services*.

Id. (emphasis added). Nevertheless, the appendices to the 2000 Guidance goes on to broadly define “life cycle assessment”:

Life cycle assessment [] means the comprehensive examination of a product’s environmental and economic aspects and potential impacts throughout its lifetime, *including raw material extraction, transportation, manufacturing, use, and disposal*. EO 13101, Section 201. The International Standards Organization, through ISO 14040, has defined life cycle assessment slightly differently as follows: Compilation and evaluation of the inputs, outputs, and the potential environmental impacts of a product system throughout its life cycle.

EPA, *Final Guidance on Environmentally Preferable Purchasing – Appendices* (August 20, 1999) (emphasis added), found at: <http://www.epa.gov/epp/pubs/guidance/finalguidanceappx.htm>.

IV. AGENCY GHG REPORTING REQUIREMENTS – IMPLICATIONS FOR GREEN PRODUCT PROCUREMENT

President Obama’s 2009 Executive Order also encourages agencies to take carbon intensity into product procurement decisions by requiring each agency to report and reduce their direct *and indirect* GHG emissions.⁵² These reporting requirements are generally modeled after the Public Sector Protocol, prepared by World Resources Institute’s (WRI) Greenhouse Gas Protocol Initiative,⁵³ as well as EPA’s private sector GHG Reporting Program (GHGRP).⁵⁴ The order requires agencies to report and reduce these emissions, though it does not specify a minimum percentage reduction that agencies must attain.⁵⁵ Each agency must create a Strategic Sustainability Performance Plan to set targets to reduce emissions by 2020⁵⁶ for both direct emissions (“Scope 1 and 2” emissions) and indirect emissions (“Scope 3” emissions). Scope 1 emissions include those “from sources that are owned or controlled by a Federal agency,” such as “vehicles and equipment, stationary sources, on-site landfills and wastewater treatment, and fugitive emissions,” while Scope 2 emissions encompass “the generation of electricity, heat, or steam purchased by a Federal agency.”⁵⁷ Indirect, or Scope 3, emissions include “transmission and distribution losses from purchased energy, business travel, employee commuting, contracted solid waste disposal, contracted wastewater treatment, [and] others.”⁵⁸ This last category of “other” Scope 3 emissions may include, but does not yet require, those that stem from the federal “vendor supply chain.”⁵⁹ To hold agencies accountable for reducing GHGs, each agency must submit an annual inventory of its GHG emissions, which OMB then compares to the agency’s targets and then publishes a “scorecard” for each agency. The rating uses a “red-yellow-green” system to chart the agency’s progress in each of the major “sustainability sectors” of direct and indirect GHG emissions, energy intensity, use of renewable energy, water intensity, fleet efficiency, and green building parameters.⁶⁰

⁵² EO 13514, *supra* n. 39.

⁵³ Federal Greenhouse Gas Accounting and Reporting Guidance (June 4, 2012) (“GHG Reporting Guidance”), at 7, found at:

http://www.whitehouse.gov/sites/default/files/microsites/ceq/revised_federal_greenhouse_gas_accounting_and_reporting_guidance_060412.pdf. See also www.ghgprotocol.org.

⁵⁴ *Id.* at 3. See also GHG Reporting Program, 40 C.F.R. Part 98; 74 Fed. Reg. 52260 (October 30, 2009).

⁵⁵ For example, the Department of Education has set a target to reduce Scope 3 emissions by 3% as of 2020. Department of Education, *January 2013 OMB Scorecard on Sustainability/Energy*, found at: <http://www2.ed.gov/about/reports/strat/sustainability/fy2012-scorecard.pdf>.

⁵⁶ EO 13514, *supra* n. 45, at Sec. 2(a). The order uses 2008 as the baseline year for calculating GHG reductions. *Id.*

⁵⁷ GHG Reporting Guidance, *supra* n. 53, at p. 14, Figure 1.

⁵⁸ *Id.* See also Technical Support Document (TSD) to the GHG Reporting Guidance (June 2012), pp. 11-12 and C-1, found at:

http://www.whitehouse.gov/sites/default/files/federal_greenhouse_gas_accounting_and_reporting_guidance_technical_support_document.pdf.

⁵⁹ The *GHG Reporting Guidance* defines these as “emissions from sources not owned or directly controlled by a Federal agency, but related to agency activities, such as vendor supply chains, delivery services, and employee travel and commuting.” *GHG Reporting Guidance*, *supra* n. 53, at p. 45.

⁶⁰ See <http://sustainability.performance.gov/> (listing links for Environmental Scorecards for each agency).

As to product procurement in particular, agencies do not have to currently report these emissions under the Federal GHG Reporting rules, under the rationale at the time in 2009 that “recognized methods for calculating emissions [were] just emerging.”⁶¹ Agencies may nevertheless voluntarily opt to report these emissions,⁶² and they must comply with the Executive Order to reduce GHG emissions associated with purchased goods. In particular, the order requires that agencies “shall consider...pursu[ing] opportunities with vendors and contractors to address and incorporate incentives to reduce greenhouse gas emissions.”⁶³ Although this does not impose a mandatory preference for the lowest-carbon products, where lifecycle GHG calculations for products are available, presumably they should be integrated into the agency’s procurement decisions to choose “environmentally preferable” products, as discussed above. In fact, as the federal guidance explicitly reserves, agencies may be required to report such product emissions in the future, if and when dependable reporting methods emerge.⁶⁴

This is not yet the federal practice, however. While LCA methodology has since become internationally standardized (though not yet commonplace in use), the guidelines do not require agencies to account for these emissions. Indeed, currently there is no procurement guideline for designating lifecycle GHG emissions or “embodied” carbon in products, and there is likewise no corresponding line-item in the sustainability procurement reporting tools for agencies to voluntarily report the GHG content of products.⁶⁵

CONCLUSION

Over the last two decades, federal product procurement in the United States has taken strides towards integrating environmental considerations into purchasing decisions. Despite this, as well as President Obama’s directive for federal agencies to reduce GHG emissions, federal procurement rules do not specifically require agencies to take into account upstream carbon or lifecycle analysis of greenhouse gases. Executive Order 13514 could be interpreted to do so, however, where such figures are available, to place more emphasis on low-carbon practices and purchasing, but otherwise agencies do not need to report Scope 3 emissions of products they procure and, as a result, federal suppliers are not yet required to quantify carbon emissions. Thus while these policies are

⁶¹ *Technical Support Document*, *supra* n. 58, at p. 11.

⁶² *Id.* at 13.

⁶³ The order states:

“[T]he agency head shall consider reductions associated with: pursuing opportunities with vendors and contractors to address and incorporate incentives to reduce greenhouse gas emissions[,] such as changes to manufacturing, utility or delivery services, modes of transportation used, or other changes in supply chain activities.”

EO 13514, *supra* n. 39 at Sec. 2 (b)(i) (emphasis added).

⁶⁴ *Technical Support Document*, *supra* n. 58, at p. 11. *Id.* Other Scope 3 emissions that the *Technical Support Document* states may be required in the future include: “operations associated with leased space; vendors, contractors and supply chain; [and] production of fuels (biofuels, gasoline, hydrogen, etc.) used to operate combustion vehicles.” *Id.*

⁶⁵ Until 2012, however, agencies did not have a way to input voluntary Scope 3 emissions into the online GHG Reporting Portal. *Id.* at p. 14.

a step in the right direction, it remains to be seen whether they will translate into a defined market preference for the “greenest” products with the smallest lifecycle carbon footprint.