



REGENERATIVE
CRISIS RESPONSE
COMMITTEE

THE CASE FOR CLIMATE CONSCIOUS, **LOW CARBON** **FEDERAL** **PROCUREMENT**

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ABOUT THE **RCRC**

The **Regenerative Crisis Response Committee (RCRC)** is a nonpartisan group of senior leaders from the banking, financial services, regulatory, and policy arenas who care deeply about ensuring the United States' economic recovery is durable, equitable, and puts us on a path toward lasting sustainability.¹

Founded in late 2020, the RCRC works under the mandate to identify, compare, and recommend changes in fiscal, monetary, and financial regulatory policies that are likely to **enable the United States to achieve net carbon neutrality before 2050.**

¹"Our Work – Regenerative Crisis Response Committee," accessed October 24, 2021.

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WHY WE'VE WRITTEN THESE WHITEPAPERS

Time and again, the U.S. economy has shown itself to be vulnerable to severe shocks, regardless of their origin. Both the susceptibility to disruption and the ability to recover from it have characterized the impact of historical shocks on households, firms, and communities. From the Great Depression to the Global Financial Crisis, and to the COVID-19 pandemic's recent effects on the economy; fiscal and monetary policy interventions have repeatedly had to be deployed—belatedly—to restore financial stability.

Most recently, the COVID-19 pandemic underscores the vulnerability of the U.S. economy to severe shocks. Over the course of nearly two years, unemployment rates spiked, millions of Americans struggled with food insecurity, and a massive government effort was needed to stabilize household finances and the economy. Whether such shocks are anticipated or not, the government typically operates in the same fashion; it is more inclined to clean up in the aftermath of a destabilizing event as opposed to taking calculated steps to guard against probable systemic risks.

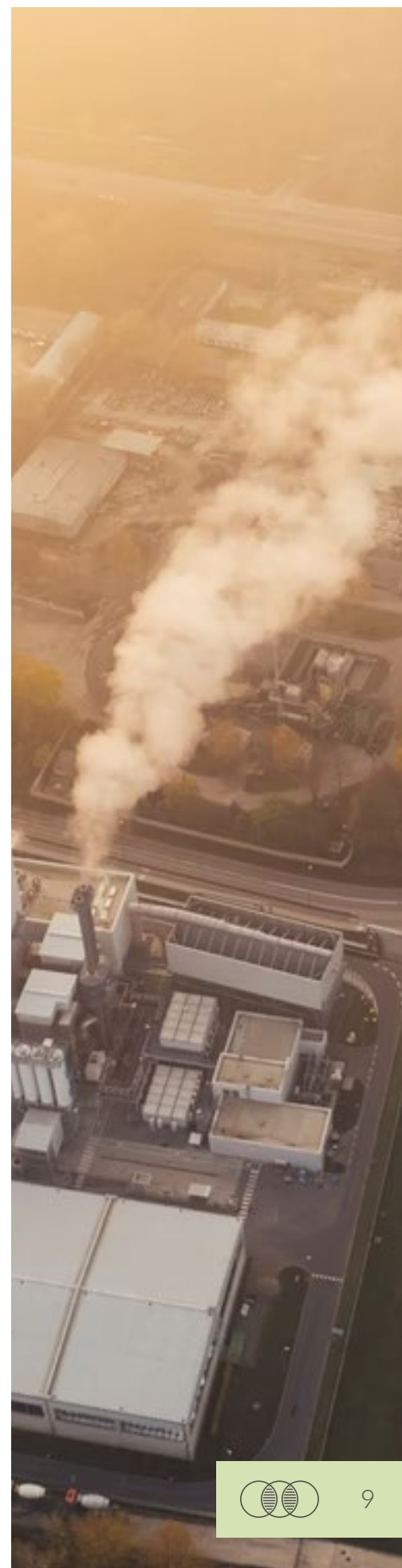
Climate change is exactly this kind of threat—one that is palpable, global, systemic, and one for which we are exceedingly ill-prepared as a society. We must overcome the default U.S. policy approach and take immediate, ambitious, proactive steps to safeguard our economy. These whitepapers are the RCRC's call to take immediate and inclusive action to enhance resilience and employ every tool at our disposal to curtail this existential threat before it is too late.

While governments around the world, including that of the United States, have made pledges and bold commitments to reduce carbon emissions to net-zero by 2050, follow-on action to transition away from fossil fuels is required and action thus far has been lackluster. Overall political ambition has been too small and too short-sighted to actually realize the inclusive transformation needed to avoid the worst effects of climate change. To accelerate such an inclusive transition, we consider both non-regressive policy tools and incentives to build a **resilient** financial system that supports scaling down emissions to net-zero by 2050.

The RCRC is a collection of economists, lawyers, former regulators, and policy experts—and we believe that it is still possible to chart a path, take action to reshape the economy and avoid the worst effects of climate change. Achieving this will take the swift implementation of smart policies.

Ultimately, we are hopeful. It is our view that monetary, fiscal and financial regulatory policy can either work to support the transition to a net-zero future or it can remain entrenched with incumbent technologies, thinking and solutions in service to the status quo.² *We believe that government-led scaling of the green mortgage market, swift implementation of new guidelines on Federal procurement, a shift away from carbon offsetting schemes to actual emissions reductions, and regulations that support the alignment of financial sector activity with our net-zero goals are targeted solutions the Federal Government can implement to help align the economy with our Paris Agreement targets.* Not only will action on these fronts help lower our emissions profile but it will also boost American jobs, businesses, and competitiveness, as well as support economic recovery from COVID-19.

² Inspired by: Michel Aglietta and Etienne Espagne, "Climate and Finance Systemic Risks: More Than an Analogy? The Climate Fragility Hypothesis," CEPII Working Paper (Paris: Centre d'Etudes Prospectives et d'Informations Internationales (CEPII), February 1, 2016), 7.





Our goal is to illuminate key policy actions the U.S. Federal Government could implement to incentivize behavior that will accelerate and support an inclusive transition to net-zero carbon emissions. Through government leadership, we can create the conditions for a just transition and improve climate accountability.

“We should not be asking whether we can afford to act on climate change. We should be asking whether we can afford not to. A failure to reduce emissions will create a real and permanent drag on the economy. Previous economic recessions have been temporary; but without action, severe climate impacts and their damage to our economy will become the new normal. At a certain point, we will not rebound or recover.”³

- Senate Democrats’ Special Committee on the Climate Crisis, August 2020

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³ “The Case for Climate Action: Building a Clean Economy for the American People” (Senate Democrats’ Special Committee on the Climate Crisis, August 25, 2020), 4.

EXECUTIVE SUMMARY

Purchasing practices are one of many contributors to the climate crisis. As the world's largest purchaser of goods and services, the U.S. Federal Government is in a unique position to cut a significant portion of national emissions through the development of more responsible, sustainable, and—most importantly—climate-conscious supply chains. According to the Office of the Federal Chief Sustainability Officer, federal supply chain emissions associated with federal contracts are twice as high as Federal Scope 1 and Scope 2 emissions, combined. As such, reforming Federal procurement practices to limit direct emissions as well as emissions in supply chains can play a crucial role in reaching the goal of net-zero emissions by 2050.

The Biden Administration has taken a strong stance on climate change, initiating, reinstating, and further developing necessary policy adjustments such as transitioning the government fleet to electric vehicles, supporting energy efficiency in buildings and the uptake in renewable energy generation, and drafting a new Federal Sustainability Plan. The RCRC Committee has prepared additional recommendations relevant to Federal procurement practices to help achieve maximum emissions reductions at both the government and national levels.

In this paper we set forth six recommendations that span the short-, medium-, and long-terms. In the short-term, the Federal Government should focus on *revising the contracting and reporting process*. This entails **reforming the system of forms and scorecards** used by acquisition officers when recording purchases, **updating contracts** used in the procurement process, and **implementing federal training programs and**





new supplier engagement programs. In the medium-term, the math needs to ‘check out’. We must fill a critical, economy-wide data gap with an effective and accurate **Scope 3 database and calculator** created through public-private partnership. Complementarily, the **social cost of carbon**—or price of the social and environmental costs of high emissions—**should be factored into purchasing calculations.** Currently, cheaper high-footprint goods are incorrectly advantaged when compared to products whose life cycle emissions are lower, though oftentimes have higher first-costs.⁴ Lastly, though more long-term, low carbon procurement policy must be enshrined in law. The **Federal Acquisition Regulation** must ensure that responsible procurement practices are mandatory and enforceable.

While we are not low carbon procurement experts, we see great potential in our suggested adjustments for the U.S. economy. The Federal Government is a massive market-maker and can—as it has done in the past—spur market shifts that, in turn, decouple production and consumption from emissions. All of this will only make the U.S. economy stronger and more competitive.

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⁴ The first cost, also known as initial cost, is the investment cost or purchase price. It is a category of costs that can be included in life-cycle costing calculations, defined by the GSA as “an important economic analysis used in the selection of alternatives that impact both pending and future costs.” “1.8 Life Cycle Costing,” U.S. General Services Administration, accessed November 20, 2021.



Defining **key terms**

In order to understand the RCRC’s position on Federal procurement policy, it is important to first clarify the various key terms relevant to this topic. Throughout this paper, we discuss Federal procurement or acquisition, the latter of which is defined as follows.

Acquisition: “the acquiring by contract with appropriated funds for supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated, and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract.”⁵

As suggested by the title of this paper, we propose the adoption of the term *low-carbon procurement*. This recommendation reflects our understanding of multiple iterations of this concept, beginning with Executive Order 13101 in 1998 which introduces and defines the concept of “affirmative procurement.”⁶

⁵ “Part II, The President; Executive Order 13101—Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition” (U.S. Environmental Protection Agency, September 16, 1998), 49644.

⁶ “Part II, The President; Executive Order 13101—Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition,” 49645; “Fact Sheet: Affirmative Procurement Program,” The Pollution Prevention Services InfoHouse, July 1999.



Affirmative Procurement Program: a program established under Resource Conservation and Recovery Act (RCRA) Section 6002 meant to, “assure that items composed of recovered materials will be purchased to the maximum extent practicable and which is consistent with applicable provisions of Federal procurement law... Each affirmative procurement program required under this subsection shall, at a minimum, contain— (A) a recovered materials preference program; (B) an agency promotion program to promote the preference program adopted under subparagraph (A); (C) a program for requiring estimates of the total percentage of recovered material utilized in the performance of a contract; certification of minimum recovered material content actually utilized, where appropriate; and reasonable verification procedures for estimates and certifications; and (D) annual review and monitoring of the effectiveness of an agency’s affirmative procurement program. In the case of paper, the recovered materials preference program required under subparagraph (A) shall provide for the maximum use of the post consumer recovered materials....”⁷

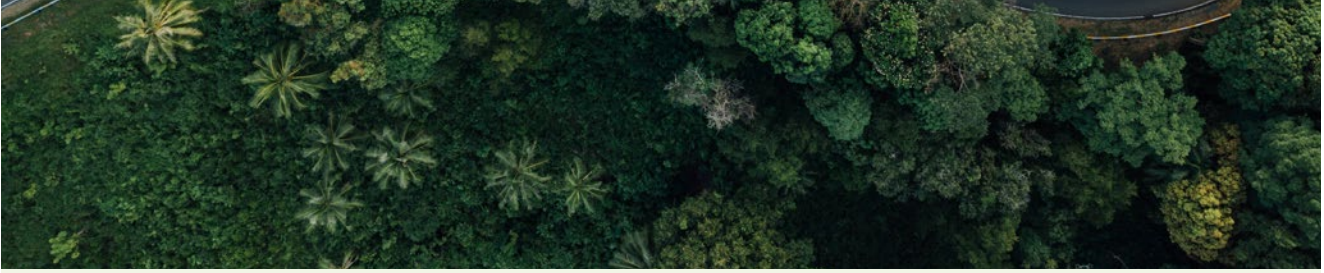
The Affirmative Procurement Program, adopted by the U.S. General Services Administration, was later renamed to the GSA Green Purchasing Program.⁸ There is no set definition of “green purchasing” or “green procurement,” and each U.S. Federal agency has its own version of such policy or program.

GSA Green Purchasing Plan: “includes requirements to promote the purchase of environmentally sustainable products and services. This order requires GSA to incorporate these requirements into daily operations and to work towards increasing and expanding markets for environmentally sustainable products and services.”⁹

⁷ “RCRA Section 6002; Solid Waste Disposal Act” (FedCenter.gov, December 31, 2002), 103.

⁸ “Green Purchasing,” U.S. General Services Administration, accessed November 21, 2021.

⁹ “GSA Green Purchasing Plan” (U.S. General Services Administration, January 7, 2011), i.



Green products: “product types covered by mandatory and non-mandatory federal environmental programs, including: Bio-Preferred; Comprehensive Procurement Guidelines; Safer Choice; Energy Star; EPEAT; Federal Energy Management Program (FEMP); Significant New Alternatives Policy (SNAP); and WaterSense.”¹⁰

The term “green procurement” often references “environmentally preferable products” which is defined as:

Environmentally preferable: “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, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.”¹¹

Note that there is other language relevant to this subject matter. Terms have evolved over the long-history of Federal procurement and are often used to describe various programs focusing on a broader *environmental impact*, but are not necessarily focused on *climate*. Therefore, we promote the term **low carbon procurement** to highlight the fact that we are championing a low carbon, climate-focused approach to federal procurement.

¹⁰ “Green Procurement Compilation,” U.S. General Services Administration, accessed November 21, 2021.

¹¹ “Part II, The President; Executive Order 13101—Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition,” 49643.

THE MOMENT

The United States government wields substantial purchasing power, with federal agencies spending \$586 billion or more annually on the procurement of goods and services. This immense sum makes the Federal Government the largest purchaser of goods and services in the world and gives it a unique ability to influence markets. Recognizing this power as a market-maker and wanting to demonstrate leadership in environmental stewardship, over the years the Federal Government has adopted targeted policies to buy more sustainable products—from prioritizing the selection of recycled paper in the 1970s to rolling out a multi-dimensional federal highways green purchasing program in 2010.¹²



All goods and services come with an environmental cost, from their production to

transport and their use and disposal. Though we may not realize it, **greenhouse gas emissions are present in every step of the value chain and across the full life cycle of the product.** In order to further reduce the Federal Government’s carbon footprint and impact on the environment, agencies are being urged to look more deeply into their supply chain and set ambitious standards and targets for purchasing low carbon products and services.

The Biden Administration, committed to the climate agenda, took quick steps to harmonize existing practices and set high standards for sustainable purchasing processes across the Federal Government. In Executive Order 14008 on *Tackling the Climate Crisis at Home and Abroad*, President Biden directed the agencies in his Climate Task Force to “prioritize action on climate change in their policy-making and budget processes, in their **contracting and procurement**, and in their engagement with State, local, Tribal, and territorial governments; workers and communities; and leaders across all the sectors of our economy.”¹³ Each Task Force agency has been directed to provide action plans that use the power of procurement to drive energy savings

¹² “FHWA Order 4460.3A,” U.S. Department of Transportation, Federal Highway Administration, June 18, 2010.

¹³ “Executive Order on Tackling the Climate Crisis at Home and Abroad,” The White House, January 27, 2021.

and innovation and are encouraged to prioritize climate in their plans. While each agency's plan must be approved by the Federal Chief Sustainability Officer, in effect the guidance is flexible and allows for each agency to tailor their plans to their operations.

The Committee is fully supportive of the President's spotlight on applying a whole-of-government approach to decarbonizing the federal supply chain in order to help meet the nation's climate goals. Raising ambitions and implementing a cohesive federal low carbon procurement policy has two important effects; first, it reduces the government's own emissions profile, and second, it sends a strong market signal to support and develop low carbon industries.¹⁴

For example, purchasing electric vehicles in the hundreds of thousands will channel billions of dollars to low carbon automotive technologies and help accelerate further innovation in and the scaling of the U.S. electric vehicle industry. Deepening low carbon and climate conscious procurement practices could therefore help propel the United States towards its 2050 net-zero target by not only shifting capital to climate-friendly businesses but also driving further cleantech innovation at home.

Low carbon purchasing can be an especially effective tool in promoting the widespread development and adoption of environmentally friendly goods in addition to strengthening provider and consumer action towards solving the climate crisis.



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¹⁴ Richard Baron, "The Role of Public Procurement in Low-Carbon Innovation; Background Paper for the 33rd Round Table on Sustainable Development, 12-13 April 2016, OECD Headquarters, Paris" (Organisation for Economic Co-operation and Development (OECD)), accessed October 24, 2021.



CONTEXT



FEDERAL LOW CARBON PROCUREMENT IS INTEGRAL TO ACHIEVING OUR 2050 PARIS GOALS

According to the International Energy Agency (IEA), **the U.S. is the world's second largest emitter of greenhouse gas emissions after China**, with total emissions of over 4.8 GT in 2019.¹⁵ Implementing more ambitious low carbon procurement guidelines is one of several strategies the Federal Government can use to continue to spur greater and necessary emissions reductions.

The Office of the Federal Chief Sustainability Officer reports that federal agencies have already successfully lowered facility energy and water use, increased consumption of renewable energy, improved the performance of their buildings, and have invested in energy efficiency improvements in response to Executive Branch initiatives introduced over the past twenty years by both Democratic and Republican administrations.¹⁶ These operational efficiencies have resulted in less waste, saved

taxpayer dollars, and reduced environmental damages. In total, greenhouse gas (GHG) emissions from Scope 1 and Scope 2 emissions decreased by over 32% between 2008 and 2020.¹⁷ **The EIA estimates that the Federal Government's total energy consumption has fallen about 26% during this same time period.**¹⁸



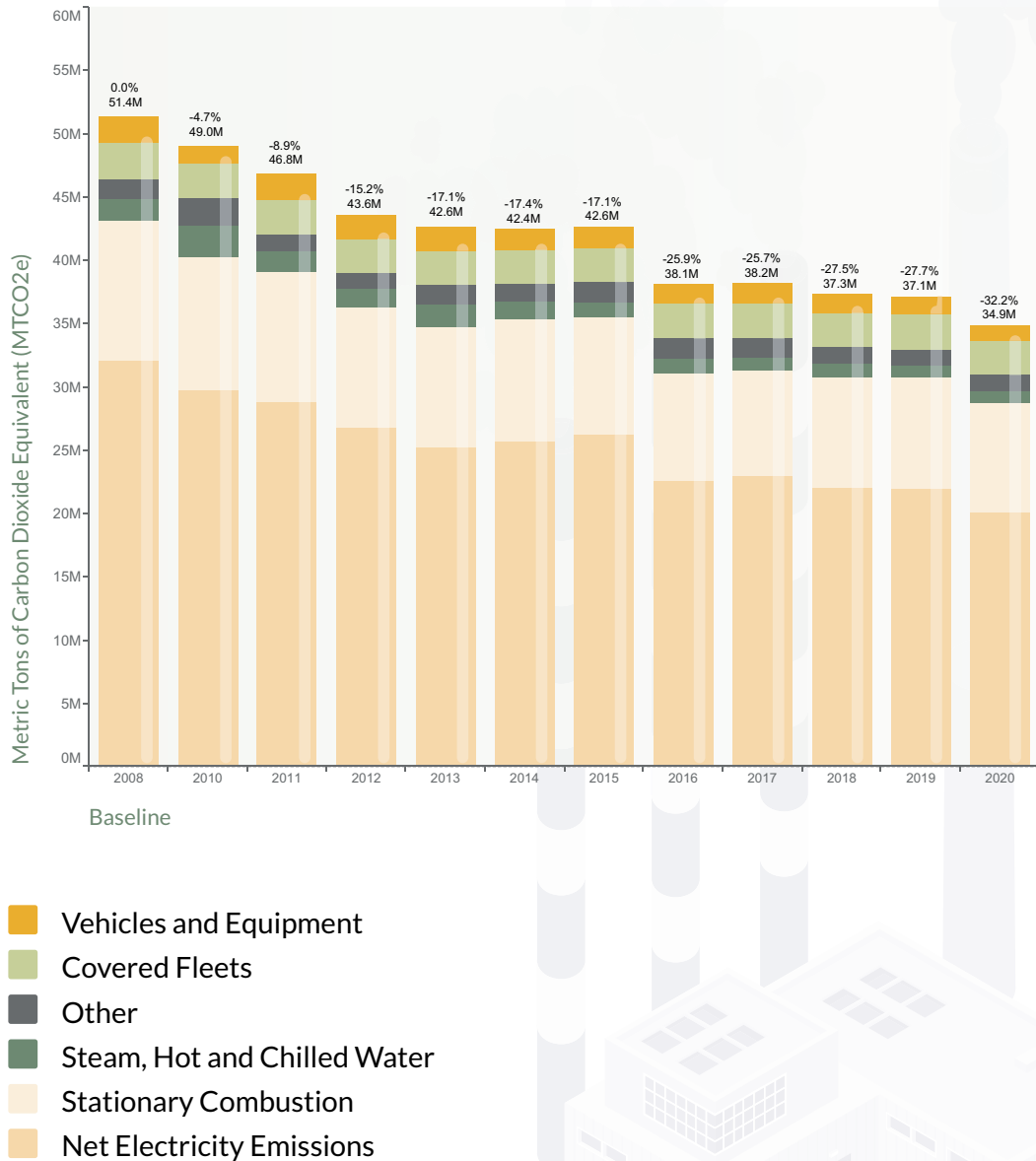
¹⁵ China's emissions in 2019 were 9.5 GTCO₂e and U.S. emissions 4.8 GTCO₂e. "Global CO₂ Emissions in 2019," International Energy Agency, February 11, 2020; "Report Extract: Emissions," International Energy Agency, March 2019. Note that we chose to cite 2019 emissions levels because 2020 data was highly skewed by the COVID-19 pandemic. For more information please see: Brett Marohl, "In 2020, the United States Produced the Least CO₂ Emissions from Energy in Nearly 40 Years," Today in Energy, U.S. Energy Information Administration (EIA), July 26, 2021.

¹⁶ Executive Order 13212 expediting energy-related projects under the Bush Administration is one such early example, as is the passing of the Energy Policy Act of 2005, which covered Federal purchase requirements. "Executive Order 13212 - Actions To Expedite Energy-Related Projects: Federal Register Notice Volume 66, No. 99 - May 18, 2001," U.S. Department of Energy Office of Electricity, May 18, 2001; "Energy Policy Act of 2005," Pub. L. No. 109-58, 119 Stat. 594 (2005).

¹⁷ "Federal Government-Wide Performance Data," Office of the Federal Chief Sustainability Officer, Council on Environmental Quality, accessed October 25, 2021.

¹⁸ Energy consumption was estimated at 1,143.2 trillion BTU in 2008 and 849 trillion BTU in 2020. "Total Energy," U.S. Energy Information Administration (EIA), accessed October 25, 2021.

FEDERAL GOVERNMENT SCOPE 1 AND 2 TARGET GREENHOUSE GAS EMISSIONS



Source: **“Federal Government-Wide Performance Data,”** Office of the Federal Chief Sustainability Officer, Council on Environmental Quality, accessed October 25, 2021.

The U.S. Federal Government’s known 34.9 MTCO₂e Scope 1 and 2 emissions in 2020, though an improvement from baseline 2008 emissions, are still the equivalent of the total emissions from countries like Jordan, Uruguay, and Senegal.¹⁹ **We must therefore acknowledge that our federal procurement practices have room for improvement** and repeat the strategic policy shifts that prompted positive social, economic, and environmental advancements in the past.

This emissions estimation likely understates the Government’s actual procurement footprint, and not just in terms of Scope 1 and 2 emissions. Scope 3 emissions, or emissions that are generated along an organization’s extended supply chain, are often substantial and, without reliable disclosures from suppliers, can be difficult to quantify. This is therefore an area where the Federal Government

could use its convening power to work with the private sector and develop solutions.

It is also important to note that any efforts by the government can be multiplied as the private sector follows suit, bringing down total domestic emissions even further. Building a new, decarbonized economy will create deep-seated momentum behind sustainability and ensure long-lasting economic change. Without both federal action and behavioral changes on the part of businesses, the U.S. will not reach carbon neutrality by 2050 nor will it reach its nationally determined contribution (NDC) of a 50-52% reduction in GHG emissions by 2030 compared to 2005 levels.²⁰ We need an economy-wide approach to emissions reductions, and a more ambitious, cohesive federal low carbon procurement strategy can help push the economy there.



¹⁹ 2018 total emissions (including land use change and forestry, “LUCF”) for these countries were: 35.81 MtCO₂e for Jordan, 34.39 MtCO₂e for Uruguay, and 34.36 MtCO₂e for Senegal. “Historical GHG Emissions,” Climate Watch, accessed October 25, 2021.

²⁰ The interim goal is to reduce emissions by 26-28% compared to 2005 levels by 2025. See “United States of America First NDC (After rejoining the Paris Agreement)” under the United States of America First NDC country page. “NDC Registry (Interim),” UNFCCC, accessed October 25, 2021.

FEDERAL PROCESS AND INCREMENTAL PROGRESS

Environmentally conscious procurement practices—which have had bipartisan support for decades—are already a part of our nation’s purchasing requirements through a patchwork of regulations and incentives across state and local governments, publicly funded institutions, as well as some federal agencies. The Department of Defense was an early leader on this front, first implementing its green procurement program in 2004.²¹

There are various Congressional statutory mandates, Executive Orders, and implementation guides to help federal agencies understand and comply with procurement-specific regulations. However, processes and rules enshrined in the Federal Acquisition Regulation (FAR) delineate procurement requirements for federal purchasing. The U.S. Environmental Protection Agency, the U.S. Department of Energy and the U.S. Department of Agriculture have developed environmental criteria for more than three hundred product categories which can be reviewed in an online database, The Green Procurement Compilation.²² **This progress that various Federal agencies and state governments have made in the past two decades is noteworthy and worth building on** as the U.S. refines its purchasing policies to meet its goal of net-zero emissions by 2050.

While existing procurement guidance in the U.S. helps reduce carbon emissions (e.g., striving for energy efficiency), most are not explicitly climate focused. Sharpening the focus of procurement to target greenhouse gas emissions remains a significant opportunity.



²¹ The management framework established to ensure compliance was drafted in 2002.

²² “Green Procurement Compilation,” U.S. General Services Administration, accessed October 30, 2021.

Currently, GSA contract actions require the supply of EPA Comprehensive Procurement Guideline (CPG), Energy Star and Federal Energy Management Program (FEMP), Electronic Product Environmental Assessment Tool (EPEAT, a third party certification program), bio-based or bio-preferred, EPA WaterSense or water-efficient, non-ozone depleting, EPA Priority Chemicals, alternative fuel vehicles and alternative fuels, environmentally preferable, and other environmentally sustainable products and services. Procurement and transactions through established federal supply sources ensures conformity with relevant EPA regulations, are competitive, and can be tracked through a central tracking system. The easiest way to meet environmentally-focused procurement requirements is by using DLA, GSA, GPO, and/or other existing “contractual [purchasing] vehicles.” CPG purchases outside of a federal supply source requires



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additional tracking and reporting.²³ Procurement decisions made on top of these requirements are up to the discretion of each agency.

Procurement reporting is required. At the Department of Commerce, for example, officers are encouraged to submit Environmental Impact Statements or Planned Use of Green Products narratives that describe how purchases contribute to minimize environmental impacts. Written justification is required if the agency decides not to procure products that are recovered, bio-based, Energy Star or FEMP-designated, or registered under the EPEAT system. Among other reviewing and monitoring activities, the Department also produces a Strategic Sustainability Performance Plan quarterly, discussing green procurement actions, review of compliance, as well as corrective actions. Data also must be accurately recorded in the Federal Procurement Data System.²⁴



²³ “GSA Green Purchasing Plan,” 2; “DLA Green Procurement Program” (U.S. Defense Logistics Agency, April 2, 2014), 32, 35.

²⁴ “Commerce Acquisition Manual 1323.70” (U.S. Department of Commerce, January 2014), 1, 13, 15, 19.

Over at least the past two decades, the Federal Government made leaps and bounds in lowering the *environmental impact* of its purchasing practices. Notably, it made the purchase of recycled paper, bio-based goods, ENERGY STAR (or energy efficient) appliances, and ecolabel products mainstream. Recent efforts by the Biden Administration on increasing uptake of electric vehicles and green energy standards for federal buildings are encouraging, intent on further reducing own-source carbon emissions and electricity consumption.²⁵ The government must now deepen and widen the environmentally conscious procurement agenda to directly address *climate impacts*, namely through decreasing value chain emissions. To President Biden's credit, we are seeing much greater political will to manifest and execute this objective.

There are numerous areas for possible improvement. According to Resources for the

Future, U.S. programs currently cover *finished products* purchased or leased by institutional purchasers. They do not, for the most part, cover basic materials such as fuels, cement,



Over at least the past two decades, the Federal Government made leaps and bounds in lowering the *environmental impact* of its purchasing practices."

steel, or products that incorporate these materials. Likewise, some low carbon procurement practices also tend to focus on production stage emissions, omitting other life cycle emissions such as inputs and final delivery to consumers. Life cycle costs usually refer to *operational life* as opposed to a more accurate "cradle to grave" approach.²⁶ Furthermore, a product or service can be considered "superior" by simply demonstrating performance



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25 By "own-source carbon emissions," we refer to emissions originating in Federal Government activities. This may include emissions from sources owned or controlled by the Federal Government (i.e., the Federal vehicle fleet) or emissions resulting from the production of electricity, heat, or steam that is then purchased by the Government. These are Scope 1 and 2 emissions, respectively. Scope 3 emissions, then, are those originating in the Federal "vendor supply chain." Shawna D. Ganley, "Federal 'Green' Product Procurement Policy in the United States" (Center for Climate Change Law, Columbia Law School, December 2013), 11.

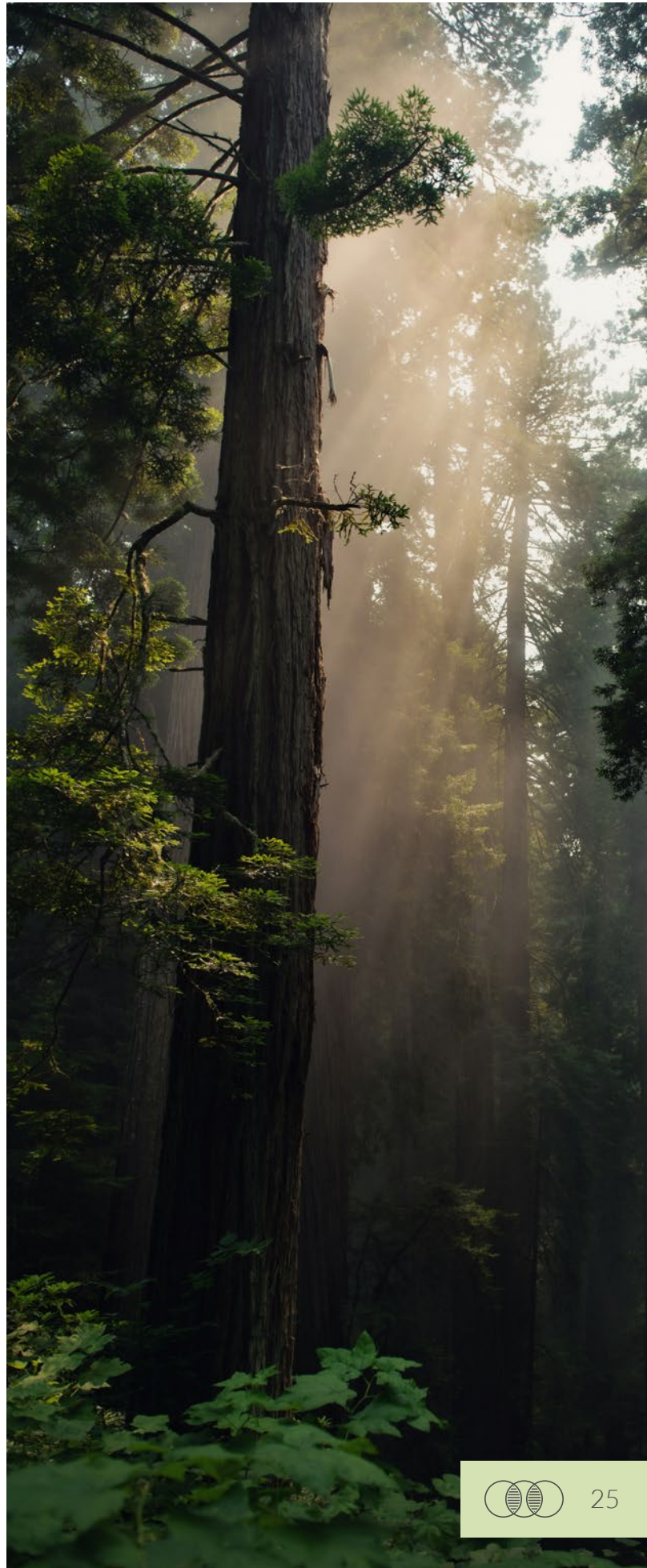
26 Ganley, 4.

that is equal to or slightly better than standard industry practice or as defined by internal industry assessments.²⁷ According to a UNEP report from 2017, two leading barriers to Sustainable Public Procurement (green purchasing) are high costs and insufficient implementation expertise.²⁸ Unlike some European countries, notably the Netherlands, the U.S. does not factor in the life cycle environmental costs of procurement.²⁹

27 The EPA's Environmentally Preferable Purchasing Program, for example, is criticized by some for promoting average industry performance standards instead of standards that would stimulate innovation. There are others who, to the contrary, consider these standards too rigorous. Alan Krupnick, "Green Public Procurement for Natural Gas, Cement, and Steel" (Washington, D.C.: Resources for the Future, November 2020), 1-2.

28 Krupnick, 9.

29 Krupnick, 10.

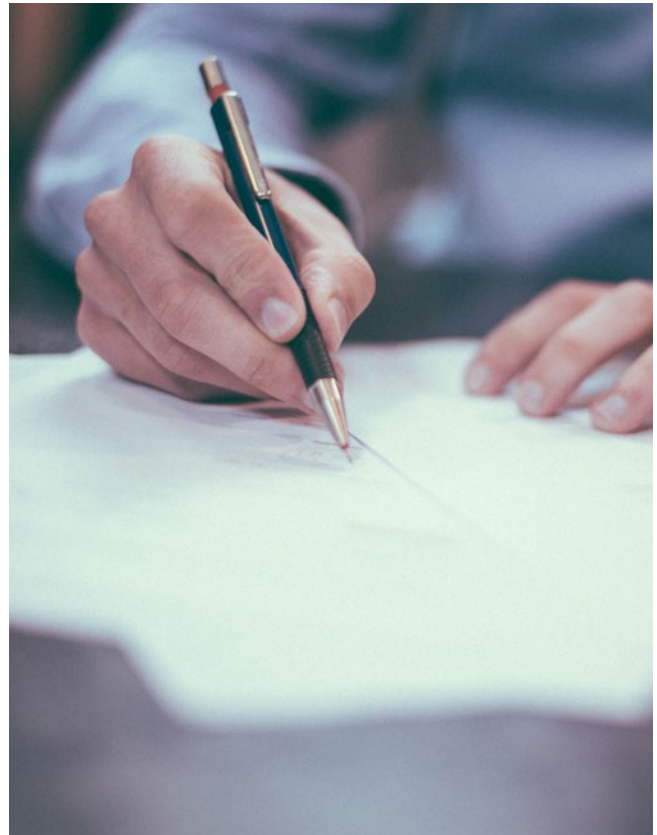


ROOM FOR IMPROVEMENT

A number of recommendations for de-carbonizing procurement practices have already been put in place. These include the implementation of demonstration funding, the establishment of a “Buy Clean Program” that drives a reduction in embodied carbon emissions, setting maximum emissions intensity benchmarks for emissions-intensive goods that become more stringent with time, allocating a portion of procurement funding to innovative low emissions materials, incorporating the price of carbon—known as the social cost of carbon—in procurement calculations, and the creation of certification and audit programs, among others.³⁰

When making purchases, Federal agency staff should be able to know and report whether a product was made using renewable energy resources. We should also better assess the balance between federal dollars spent (or the price tag of a new Federal low carbon procurement program) with the benefits of environmental outcomes.³¹ For this, a more accurate and complete reporting system

must be implemented—one that more critically assesses environmental and emissions reductions practices within each federal agency and asks questions that go beyond the simple tracking of improvements in energy and water consumption. In other words, we need a more holistic approach to the procurement process.



³⁰ The Buy Clean California Act, signed into law in October 2017, established a Green Procurement program for steel, glass, mineral wool board insulation, and other infrastructure materials. It is expected that cement will soon be added to this list. Bidders have to prove (and certify) that their products meet or beat Global Warming Potential (GWP) standards, currently set at the industry average factoring in an uncertainty tolerance. Krupnick, 17–18.

³¹ While agency-specific environmentally focused procurement exemptions exist, there are others that are more universal: price and accessibility. An “unreasonably priced” GPP item is one that “costs more than a comparable non-recycled or bio-based product.” Under EPA regulations, agencies are not required to purchase GPP items only available at unreasonable prices. In an example, an “unreasonably priced” item as per the Department of Commerce is one that costs 10% more than a comparable, non-recycled product. However, agencies don’t have to claim this waiver; it is left up to the discretion of the agency making the purchasing decision to weigh the extra costs with the environmental benefits of such purchase. “Commerce Acquisition Manual 1323.70,” 6; “FHWA Green Procurement Guide,” U.S. Department of Transportation, Federal Highway Administration, April 2010.

A stronger federal low carbon, climate conscious procurement policy can have additional, positive knock-on effects on both the U.S. economy and on the nation's emissions profile. Federal-scale investments can trigger innovation as well as create or support new jobs and markets for advanced technologies, products, and services. Ultimately, a new, better informed customer base can develop, and continuously demand new low carbon products and services.³² By setting more ambitious procurement standards and shifting large-scale consumption to low carbon products and services, the Federal government can serve as a model for corporations and state and local governments, as it has already done over the past several decades. This can stimulate behavioral changes within the private sector, boost innovation, and growth,³³ multiplying economy-wide benefits (decarbonizing and otherwise) along with emissions reductions.

³² Richard Newell, "Federal Climate Policy 101: Reducing Emissions," Resources for the Future, March 3, 2021.

³³ Krupnick, "Green Public Procurement for Natural Gas, Cement, and Steel," 20-21.





Timeline of environmentally focused **procurement policies** in the U.S.

In 2004, green procurement product and service referred to purchases from recovered materials, environmentally preferable products as per the Environmental Protection Agency (EPA), energy efficient products as per the Department of Energy (DOE), bio-based goods as per the Department of Agriculture (USDA), fuel efficient or based on alternative fuel, and non-ozone depleting. Procurement standards for products were thus set by one or more of the EPA, Office of Energy Efficiency and Renewable Energy of the Department of Energy (OEERE), USDA, and Office of the Federal Environmental Executive (OFEE).³⁴ In 2008, this list was expanded to include reduced petroleum consumption and increased use of alternative fuels, renewable energy resources, and biofuels.³⁵

In 2006, the USDA defined its Green Purchasing Affirmative Procurement Program as the purchase and use of recycled, Energy Star, energy efficient, biobased, and environmentally sustainable products and services. These include products with recycled content (as per the EPA's Comprehensive Procurement Guidelines), Energy Star and FEMP-designated energy efficiency products,

³⁴ "Department of Defense Green Procurement Strategy; Promoting Environmental Stewardship throughout the Department of Defense" (U.S. Department of Defense, August 2004), 5.

³⁵ "Department of Defense Green Procurement Program Strategy; Promoting Environmental Stewardship Throughout the Department of Defense" (U.S. Department of Defense, November 2008), 2.

bio-based products as per USDA's biobased program, and environmentally preferable products (as per Executive Order 13101 of 1998).³⁶

Similarly, in the Federal Highway Administration's (FHWA) procurement guidelines dating 2010, purchases should also be mindful of recycled content, water-efficient products, the EPA's priority chemicals, and the product's lifetime and maintenance requirements. These guidelines sought to reduce environmental damages through the purchase of environmentally sustainable products and services that are consistent with price, performance, availability, and safety considerations. The EPA's Comprehensive Procurement Guideline (CPG) list—which included product categories such as construction, landscaping, non-paper office, paper, transportation, and vehicular products, among others—the USDA's designated list of bio-preferred products, Energy Star, and Federal Energy Management Program products are example resources used in the FHWA's purchasing decisions.³⁷

³⁶ "Green Purchasing Affirmative Procurement Program," U.S. Department of Agriculture, June 30, 2006.

³⁷ "FHWA Green Procurement Guide."



The case of Pennsylvania: **how states are pushing through their own environmentally conscious procurement agendas**

In addition to federal agencies, some U.S. states have their own environmentally focused procurement policies and agendas. Pennsylvania’s “Buy Green,” for example, seeks to **“incorporate environmentally sustainable practices into its planning, operations, policymaking, and regulatory functions and to strive for continuous improvement in environmental performance with the goal of zero emissions.”** This definition, in line with an Executive Order by the Governor’s Green Government Council dated March 1998, is notable for its focus on zero emissions. The state’s goals of demonstrating environmental leadership, stimulating innovation and market development, supporting emerging technologies, maximizing the number of EPP contracts, increasing awareness of low carbon procurement’s benefits, and providing leadership in low carbon procurement practices demonstrate an understanding of the significance of climate conscious and sustainable purchasing practices.³⁸

³⁸ “Part I Chapter 22, ‘Green’ Procurement” (Commonwealth of Pennsylvania Department of General Services, September 2011), 1; “Green Procurement,” Commonwealth of Pennsylvania Department of General Services, accessed October 25, 2021.

AN INTEGRATED, HOLISTIC APPROACH TO DECARBONIZING PROCUREMENT

Affirmative Procurement Program (AP) and Environmentally Preferable Purchasing (EPP) are often used interchangeably with environmentally conscious, green procurement programs. **AP is a program where procured items are “composed of recovered materials” while EPP refers to products and services that have “a lesser or reduced effect on human health and the environment when compared with competing products or services serving the same purpose” in terms of “raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or product service or disposal.”**

EPP encompasses all the more sustainable purchasing options that the Federal Government follows, like WaterSense and recycled-content rules. Green procurement preference programs include, but go beyond, the concepts of both AP and EPP.³⁹ So-called environmentally preferable products, overseen by the EPA, often fall into multiple green procurement categories.⁴⁰ Following the natural evolution of these programs and in response to the climate crisis we are facing, we support retooling and

unifying the various federal preferred products and environmentally conscious procurement programs into a *low carbon procurement* framework applied across the Federal Government that focuses on emissions and climate impacts.

Low carbon procurement guidelines can be specific to each agency’s procurement activities. They should entail a process for determining low carbon procurement opportunities and routine updates to the assembled opportunities to account for any changes in the agency’s mission and/or qualified product availability. This should be done at the agency level where



Following the natural evolution of these programs and in response to the climate crisis we are facing, we support retooling and unifying the various federal preferred products and environmentally conscious procurement programs into a *low carbon procurement* framework applied across the Federal Government that focuses on emissions and climate impacts.”

³⁹ “Department of Defense Green Procurement Strategy; Promoting Environmental Stewardship throughout the Department of Defense,” 19–20.

⁴⁰ “Green Purchasing Affirmative Procurement Program.”

procurement requirements are defined. A system of documentation, accountability, corrective action, and management review is essential in ensuring that all low carbon procurement requirements as per U.S. law, regulations, and Executive Orders are met (or, in the better case scenario, exceeded).⁴¹ At the same time practices should be flexible, reflecting the cultures and priorities of each agency and allowing them to make emissions reductions in their own unique ways.⁴² The focus should be on the reduction of Scope 3 emissions.



Low carbon procurement guidelines should take into account the social cost of carbon in life cycle costing, or in calculating the total cost of ownership of a product or service over its lifetime. Moving forward, it will be crucial for the U.S. to incorporate an internal cost of carbon in its procurement decisions. This will

provide a more accurate representation of life cycle costing, puts a number on climate impact, and puts the nation in a position to negotiate with countries implementing carbon taxes and similar measures. As the social cost of carbon is revised to a new (likely higher) number, it will become more relevant to many procurement decisions, if included properly.

Transparency and access to information will similarly be key.

Large federal contractors should be given guidance on how to measure the carbon emissions of their supply chains and required to disclose this information when applying for federal contracts. Access to these data sets would make it easier for agencies to calculate emissions costs, and would also help non-federal actors (firms or state and local governments) better reduce their emissions. Training of personnel will be an important element of the low carbon procurement management framework. Even in existing Green Procurement guides, agencies express the need to educate employees on federal qualifying requirements and their responsibilities when making product and service purchases for their departments; minimizing solid waste generated; or reducing energy and natural resource consumption; as well as expanding the market for such products and services.⁴³

⁴¹ This was inspired by: "Department of Defense Green Procurement Program Strategy; Promoting Environmental Stewardship Throughout the Department of Defense," 6–8.

⁴² This should include a materiality analysis or, at a minimum, a spend analysis to make sure agencies are targeting the appropriate spend categories and "hotspot" areas of impact.

⁴³ "Department of Defense Green Procurement Strategy; Promoting Environmental Stewardship throughout the Department of Defense," 3.



The EPA's five principles for environmentally preferable purchasing of goods and services

- 1. Environment + Price + Performance = EPP.** Environmental considerations should be part of the normal purchasing process.
- 2. Pollution Prevention.** This goal should be emphasized in the purchasing process.
- 3. Life Cycle Perspective/ Multiple Attributes.** Various life cycle attributes should be taken into consideration for each product and service.
- 4. Comparison of Environmental Impacts.** The environmental impacts of products and services under consideration should be compared.
- 5. Environmental Performance Information.** Information pertaining to the environmental performance of each product and service should be collected.⁴⁴

⁴⁴ "DLA Green Procurement Program," 35.

RECOMMENDATIONS



To say that the federal-level procurement process is complex is an understatement.

Developing a comprehensive framework for procurement across government agencies will be challenging on numerous fronts. **First**, it has always been difficult to align agency-level and federal-level procurement goals and values.

Second, the Federal Government faces the moral issue and potential conflict of whether to prioritize low-emission contractors over small or minority-owned businesses, segments of the economy that the government is committed to supporting and engaging. **Third**, there are various approaches to calculating a good's precise footprint, which complicates the comparison of goods at different price points with drastically different footprints. Fourth, acquisition officers lack adequate know-how and reporting platforms to accurately make and record purchases. In the face of all this nuance, it is important to remember that each and every purchase made has broader externalities that contribute to our national emissions profile. For that reason, we must make adjustments to our procurement framework

that will stimulate emissions reductions across the whole supply chain.

Changing the procurement culture within an organization as massive as the U.S. Federal Government is a gargantuan task. **We therefore propose the implementation of change in phases.** Our recommendations cover the contracting, technology, cost-benefit, and legal aspects of decarbonizing procurement over the short-, medium-, and long-term. The impending climate crisis requires us to act immediately, starting with short-term solutions that can be more quickly implemented. We must simultaneously start acting on medium- and long-term fixes with the understanding that the sooner the Federal Government develops and champions a low carbon supply chain, the better.

Below, we outline a series of steps to improve the procurement process. Some can be achieved in the near-term, some will take time. In addition to these reforms, in the very near-term, the Federal Government can target a series of substantial irreversible purchases and direct that they be made in a manner that reduces the Government's climate footprint. The act of shifting to an all electric vehicle fleet is a prominent example. Purchasing decisions for goods or services that will continue to generate emissions for years to come (like vehicles, generators, or buildings) need to be examined as soon as possible with climate impacts in mind.



Short-term:

Revising the contracting and reporting process



1. IMPROVE THE SYSTEM OF FORMS AND SCORECARDS

The system of forms and scorecards used to record and track low carbon procurement practices needs to become significantly more dynamic on several fronts.

The understanding of procurement lacks depth with respect to *climate* considerations. Acquisition officers have limited choices when reporting their purchases. The information currently compiled reflects the Federal Government’s definitions of, for example, recovered material, energy efficiency, biobased products, and EPP. The system’s lack of complexity, specificity, and comprehensiveness has led to a significant knowledge gap where our understanding of “green procurement” success is limited to alignment with EPA-recognized EPP. In turn, this data fails

to build a full emissions picture at both the agency and federal levels.

The system of forms and scorecards should not only be more inclusive of climate considerations, but should also serve as a guide for federal acquisition professionals. We are asking a lot of acquisition professionals in decarbonizing the federal procurement process; most are neither low carbon procurement specialists nor environmentalists and their mandate is to make purchases that further the objectives of their respective agencies. As instructed by the existing system of forms and scorecards, they often identify “environmentally friendly” purchases as those with precedence in existing requirements under the EPP and biobased-goods programs. The current system does not guide acquisition

officers to accurately and fully comprehend and report on the characteristics of goods and services purchased. Other times, inadequate form design prevents acquisition professionals from reporting on climate-conscious, low carbon procurement decisions that do not clearly fall into any of the current procurement categories.

Climate change is being fueled by emissions originating in both tangible and intangible goods, yet we often forget about the latter. We need to think more about environmental outcomes in purchases that do not have obvious, tangible impacts. Specifically, a key disconnect related to current reporting standards is that we do not accurately account for emissions associated with *services*. Federally purchased goods have a larger footprint than just production and consumption alone. For example, while an IT purchase may be categorized under EPEAT, there is no way to report—based on the forms currently in use—the emissions related to a good’s transport or the associated travel required of IT contractors.

What these inconsistencies tell us is that the data collection process should be more than just checking off boxes. Reporting forms and scorecards need to be comprehensive so that acquisition officers with no knowledge of sustainable, environmental, or low carbon procurement can input accurate and complete information. This can be done,



Reporting forms and scorecards need to be comprehensive so that acquisition officers with no knowledge of sustainable, environmental, or low carbon procurement can input accurate and complete information."

for example, by replacing the system of checking boxes to one that includes drop-down menus. Forms should also be able to record purchases that fall under multiple categories, include service considerations, and develop other classes of climate-relevant procurement practices. Given its expertise in this field, the Department of Energy (DOE) must spearhead this exercise into reporting best practices. These improvements will help us understand the full extent of our low carbon procurement preferences and patterns. As a result, reporting will be better able to show not just the positive climate impacts resulting from the Federal Government’s new procurement strategy, but also where we have historically fallen short of cutting supply-chain emissions.



2. AMENDING CONTRACTS CURRENTLY USED IN THE PROCUREMENT PROCESS

More accurate data collected through a more dynamic reporting system is the first step in advancing a low carbon procurement agenda. Complementary (and more profound) is the opportunity to **compile supply-chain data from the suppliers themselves**. This could be achieved were the Federal Government to require amendments to contracts used by agencies in the procurement process. This can be quickly carried out through an Executive Order, though ultimately such obligations should become mandatory under the FAR.

Each agency has its own format for procurement contracts. The advantage of an individualized system of contracts is that they allow each agency to tailor purchases to its specific needs and culture. However, without jeopardizing each agency's autonomy, some aspects of these contracts can be made universal so

as to support the low carbon procurement agenda.

Specifically, these contracts should mandate suppliers to disclose climate-related risks, their financial exposure to climate change, and audited value-chain emissions, among other relevant data. These contracts should also reinforce supplier-specific emissions reductions over time. If it fails to make targeted emissions cuts, the supplier risks losing its government contract. This push by the Federal Government will help put climate at the forefront of business considerations.

A good sample contract on which the Federal Government may model its revisions was made publicly available by cloud-based software company Salesforce. In its Sustainability Exhibit, Salesforce obligates the supplier to agree that “the environment is a key stakeholder” in the agreement and that “climate change is the greatest challenge humans have ever faced.”⁴⁵ Only collaboratively can we address the risks posed by climate change. The contract commits the supplier to submit its climate commitment to the Science-Based Targets initiative and to a “plan of continuous improvement.” The supplier also has to

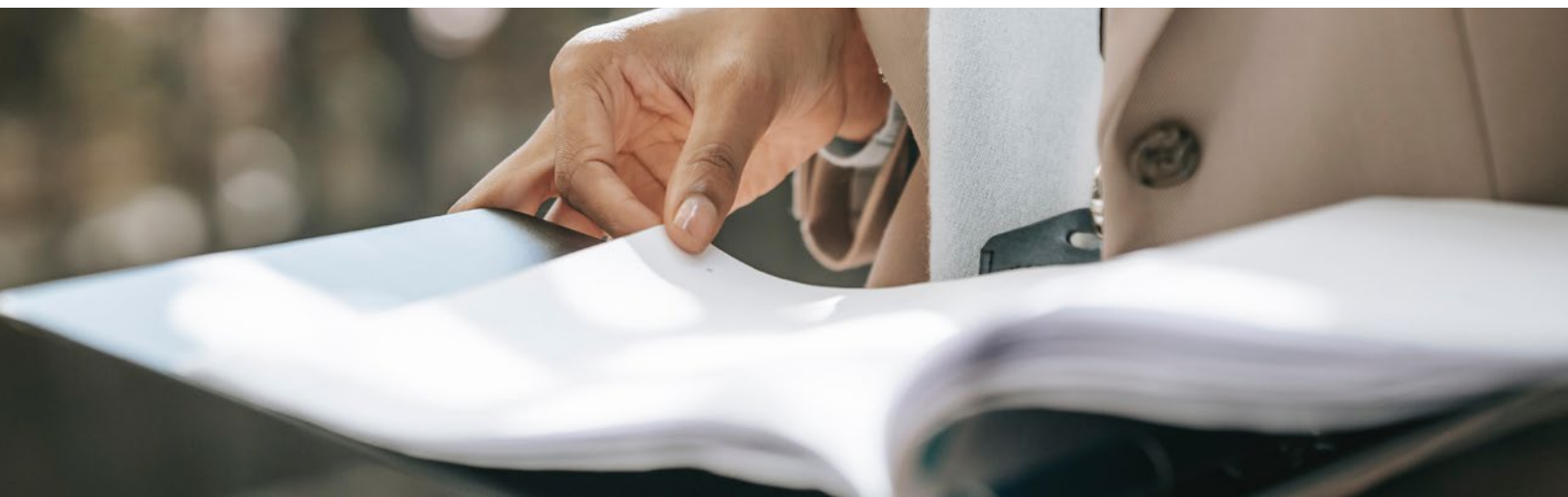


⁴⁵ “Sustainability Exhibit” (Salesforce, October 2021), 1.

prepare “Carbon Neutrality Attestations,” emissions reports, and sustainability scorecards, among other disclosures.⁴⁶ In this regard, Salesforce’s commitment to climate is exceptional; the Federal Government has no reason not to follow suit. Alternatively, the Federal Government could also refer to the list of contract climate clauses compiled by The Chancery Lane Project.⁴⁷

The Federal Government may, understandably, be concerned about the impact of such contract amendments on small and minority-run businesses. One solution to this challenge is to phase-in this recommendation based on a company’s size (with those receiving the largest contracts, or large strategic suppliers going first). This will allow the Federal Government to start making large supply-chain emissions cuts while giving smaller suppliers time to adjust (the supplier

engagement programs described below can also help). Triggering behavioral changes in these large companies will have a ripple effect, stimulating economy-wide supply chain adjustments and likewise catalyzing shifts in other firms not directly connected to government procurement programs. For example, in the IT sector it is common for large firms to train and engage with their sub-suppliers around new regulations and guidelines. In this case, it would be typical for large IT firms to train smaller firms around conducting climate assessments, reporting and impact calculations. Though this adjustment process will take time across industries, the Federal Government may find itself supporting other small, climate-focused businesses in the short-term, ultimately fulfilling its responsibility to support this segment of the economy.



⁴⁶ “Sustainability Exhibit,” 2–4.

⁴⁷ The Chancery Lane Project, “Climate Clauses,” The Chancery Lane Project, accessed October 25, 2021.

3. FEDERAL TRAINING PROGRAMS AND SUPPLIER ENGAGEMENT PROGRAMS

Procurement staff need to understand the new priorities and purchasing process if the low carbon procurement agenda is to play out successfully. As such, the Federal Government must prepare and conduct mandatory training programs for all levels of acquisition professionals. The contracting officer does, after all, influence how companies are evaluated and how contracts are awarded. It is the government's responsibility to explain not just its new policy direction and revised procurement process, but also the climate ripple effects of maintaining the procurement status quo. These programs should be mindful of the nuances and difficulties in implementing low carbon procurement guidelines at the transaction level.

Likewise, in preparing the American economy for this structural shift, **the Federal Government should support businesses through supplier engagement programs.** Through these programs, suppliers should come to understand what low carbon procurement means to the Federal Government, what will be required of them as federal contractors, and the government's commitment to supply-chain emissions reductions. Climate conscious, low carbon procurement will become a more innate practice once it is adopted by the

business community. The government should therefore also consider offering other forms of support such as zero- or low-interest loans to suppliers that are making appropriate supply-chain adjustments to reduce emissions. This will bolster support for the government's diverse suppliers and make sure that no business is left behind.



Medium-term:

Focus on numbers



4. FILLING THE CRITICAL DATA GAP THROUGH TECHNOLOGY

While reporting is a necessary tool, information alone will not lead to emissions reductions. At the same time, we cannot wait for legislation to pass before we start acting on emissions reductions. Therefore, in the medium-term, the Federal Government urgently needs to support the development of a publicly accessible Scope 3 database and calculator.

One entity's Scope 3 emissions is another entity's Scope 1 or 2 emissions. There is no universally accepted methodology for calculating and monitoring Scope 3 emissions—primarily due to high complexity and cost, lack of transparency on emissions data, disagreement on what these emissions entail, and a general lack of ambition to make economy-wide significant emissions reductions. Even private sector firms struggle to categorize, calculate,

and account for Scope 3 emissions. Without proper data, we can't actually know for sure what our true emissions are. Subsequently, we can't lower emissions without knowing their source. If the world is to make profound emissions reductions, this R&D is needed as soon as possible.

We recommend that the Federal Government form a public-private taskforce or partnership with technology companies and include climate scientists in this group. Likewise, we recommend the Department of Energy spearhead this initiative. Together, **these organizations have the capacity to develop a publicly-available platform that any and all businesses can use to determine and calculate their Scope 3 emissions.** This will not be yet another estimator; the world needs

standardization through a comprehensive, uniform measuring stick for Scope 3 emissions. The platform needs to be user-friendly, not simply listing the steps for calculating emissions but performing Scope 3 calculations, itself. In addition to tracking emissions footprints, this platform should also provide suppliers, agencies, and other interested users data on how far they are from reaching their respective yearly emissions reduction targets.

This tool will make an even greater impact if it shows users how and where in the supply chain specific operational changes can decrease a supplier's emissions.

This tool will have implications far beyond the U.S. Federal Government's footprint. It should, of course, be used by all government agencies and their suppliers and become a part of the procurement reporting requirement. A domino effect could follow, triggering enterprise-wide behavioral changes as well as adjustments to production and consumption patterns across the economy. This will not just make the federal procurement process smoother, but it will also lower national emissions.

Such a tool will of course, be subject to improvements over time as innovations such as satellite and sensor tracking of emissions become more accepted and reliable with the input of DOD, NASA or other technology-driven agencies with ever-increasing capacity to monitor and measure human activity and emissions worldwide. Materials-based

life cycle analysis insights will also continue to grow more accurate and together these trends will enable increasingly precise measurement and checking of data. This inevitable advance in granularity and reliability may create some challenges in comparing supplier GHG baselines and reductions over time, but this can be managed by versioning the tool and benchmarking with established versions while innovating to improve accuracy.

This should be a free resource for a number of reasons. **First and foremost, small, women-run, black-owned, and other minority businesses—with whom the Federal Government is already committed to do business—should not be subject to falling behind in the shift to low carbon procurement practices due inequitable access to data and support.** Second, this platform will allow American-businesses to become more competitive, supporting the broader Made In America agenda and making sure our manufacturers are not disadvantaged as other countries roll out carbon price programs. Third, all public and private entities must be on the same page in terms of what constitutes and how to calculate Scope 3 emissions. Lastly, despite high short-run costs, government-spurred innovation will directly benefit the private sector and result in economy-wide growth and development.

We encourage the Biden Administration to focus on this long-lived investment, its national and global implications, and its impact for decades to come.

5. FACTOR IN THE SOCIAL COST OF CARBON **IN PROCUREMENT DECISIONS**

Each agency has a different method for determining **Best Value Tradeoff**—or, according to the FAR, the process of making an award not based on lowest price or highest technically rated offer but rather on factors considered of best interest or highest value to the government⁴⁸—when making purchasing decisions. While it is a misnomer that procurement decisions are always made on a lowest-cost basis (only a defined set of products and services can be purchased this way), each agency has its own unique understanding of “best value.” In many instances, higher-priced best value choices must be documented and a certification of cost or pricing data form filed. This unnecessarily complicates the procurement of low carbon goods and services, putting lower cost, higher footprint products at considerable advantage. To put low carbon products on an even footing, best value considerations should factor in the social cost of carbon in product cost-benefit and/or life cycle costing calculations, and factor in the good’s total lifetime, not just agency lifetime.⁴⁹

The FAR does not impose strict best value determinations, less still including the social cost of carbon. It may have been intentional



To put low carbon products on an even footing, best value considerations should factor in the social cost of carbon in product cost-benefit and/or life cycle costing calculations, and factor in the good’s total lifetime, not just agency lifetime.”

to forego cost calculation standardization, leaving room for agency flexibility. **Today, this flexibility has led to a disconnect with the low carbon procurement agenda.** Climate factors must be included in the foundation of cost-benefit analyses and life cycle costing, and this must be constant across agencies. Encapsulating the negative externalities of climate change on society would give a more accurate estimation to the product’s total cost of ownership, or purchase price plus the price of operation. Adoption of EPA-verified procurement guidelines have led to cost savings over time, an important factor to take into account in updated, low carbon procurement practices.

⁴⁸ “Exhibit 10; Best Value Tradeoff Sources Selection Procedures” (U.S. General Services Administration), accessed October 24, 2021; “15.101-1 Tradeoff Process,” Acquisition.gov, accessed November 21, 2021.

⁴⁹ Ganley, “Federal ‘Green’ Product Procurement Policy in the United States,” 4.



The RCRC's position on the social cost of carbon

*“The Obama era SCC was informed by the Integrated Assessment Models (IAM) being used at that time. **Since then, the evidence is that the damage function used in those models is much too conservative.** Moreover, those models have been extensively criticized by Stern and Stiglitz (2021), for their inadequate treatment of risk—which is central to climate change; for their failing to come to terms with the myriad of other market failures which interact with those associated with climate change, and with their failure to deal adequately with distributive effects within and across generations. Stern and Stiglitz show that dealing with each of these defects in the standard IAM models leads to a higher SCC, and cite studies showing that dealing even with a single one of these effects leads to substantially higher SCC. Indeed, the standard IAM models do not adequately incorporate the value of lives, health, or biodiversity, all of which should be central to assessing the social cost of carbon... In short, the implication of research since the Obama era SCC established that the social cost of carbon—even using the unacceptable discount rates employed—is substantially higher than the number adopted by the Obama Administration.*

The construction of the social cost of carbon should also consider whether the rate chosen is consistent with the nationally determined contributions of the United States under the Paris Agreement, whether such a social cost of carbon,

if implemented on a widespread basis, would keep the warming of temperatures below 2 or 1.5 degrees Celsius. Given the uncertainty of modeling, it is important to make sure that the social cost of carbon calculated can accomplish climate goals necessary to avoid catastrophic damage from climate change. Standard IAM models suggest that a social cost of carbon in the order of magnitude of that employed by the Obama Administration would result in an increase in temperature of around 3.5 to 4 degrees centigrade, so it clearly fails this criterion.”⁵⁰

- Joseph E. Stiglitz, Jay C. Shambaugh, Stephanie Kelton, and Lawrence Baxter, letter in response to “Notice of Availability and Request for Comment on ‘Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates Under Executive Order 13990’” to the Office of Management and Budget, June 2021

⁵⁰ “Comment on FR Doc # 2021-09679,” Regulations.gov, June 22, 2021.

A complementary policy shift is to make it easier to purchase low carbon products with higher first-cost pricing. A higher first-cost pricing threshold will allow agencies to accommodate the higher cost of low carbon products before economies of scale lower costs in the longer run and make sure they don't lose out at the onset. There is precedent for such action—for example, when the Federal Government wanted agencies to begin purchasing recycled paper, a small price differential was enabled. Today, it has become standard to purchase recycled paper.

Finally, **it is inevitable that best value determinations, cost-benefit analyses, and life cycle costing calculations will differ between the federal and agency levels.**

Sometimes, low carbon procurement decisions will be economically disadvantageous to an agency though beneficial to the climate

agenda overall. The Federal Government must reconcile these differences by considering the scope of change possible with a less emission-intensive supply chain.⁵¹ Low carbon purchases can be long-lived investments with implications that last for many years. It will be important to remember that single purchases amass significant externalities. The benefits of a federal low carbon procurement policy approach benefits every American.



⁵¹ To support this insight, the Federal Government may wish to document the added cost of climate-preferred products compared to the cost of carbon capture, or other more costly long-term solutions that procurement of higher emitting products and services could make necessary.

Long-term:

Prioritizing low carbon procurement practices through legislation



6. LOOKING LONGER TERM: ENSHRINE LOW CARBON PROCUREMENT RULES INTO THE FAR

Government agencies are good at purchasing ENERGY STAR products because they are mandated to do so under the FAR. Agencies that fail to comply with this regulation have to submit a significant amount of paperwork. Going forward, it will be difficult to further reduce emissions without additional, obligatory regulation. What good do disclosures, comprehensive Scope 3 calculations, and new best value tradeoff considerations do without enforcement?

If we truly want to get to net-zero, we need better standards. The procurement improvements made so far can be attributed to better standards put in place with EPA-verified EPP. Along with defining and mandating low carbon procurement practices across agencies,

enforcing accurate disclosures, and giving agencies financial leeway to buy low carbon, it will be important for any FAR revisions to factor in a mandatory social cost of carbon in procurement calculations. While rulemaking normally takes around 18 months, it can (and has in the past) taken up to 5 years. Because this process takes so long, and because the climate crisis isn't waiting, we must work on solutions that can support the low carbon procurement agenda before rulemaking becomes enforceable. Despite the long timeframe for this recommendation, this is an important step to take as it keeps agencies accountable and ensures they take climate impacts and emissions into account when making their procurement decisions.

CONCLUSION



The Federal Government should implement a mandatory, enforceable low carbon procurement policy that incentivizes supply-chain and ultimately economy-wide emissions reductions. Scope 3 emissions, which are highly and universally misunderstood, are key to comprehending the scope of emission cuts required and where in value chains they need to be made. The Federal Government does not have the know-how or capacity to do this alone, so it must therefore join forces with climate and tech experts to fill this major knowledge gap. Only this, together with a combination of stronger disclosure terms, reporting, and more rigorous and accurate pricing calculations, will help us get to net-zero emissions by 2050. Moving forward, correct math and enforcement of new procurement policies are prerequisites for the climate agenda.

