



A Green Buyers Club: Transatlantic Cooperation on Green Public Procurement



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A Green Buyers Club: Transatlantic Cooperation on Green Public Procurement

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December 2023 | © 2023 Clean Energy Canada, The Center for American Progress and Adelphi

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Executive Summary

The goods and services purchased by governments make up a significant share of our economies. When governments wield this spending power strategically, it has the potential to drive policy change and to shift markets. Green public procurement (GPP) policies incentivize economy-wide decarbonization by helping low-carbon products become the default option in the marketplace.

This report analyzes the status of GPP for construction materials (also known as “Buy Clean”) in Germany, Canada, and the United States. These three large industrial economies are among the world’s frontrunners when it comes to decarbonization, but also each have a federal governance structure that presents challenges to effective procurement policy implementation.

In the United States, President Biden announced a Federal Sustainability Plan and related Executive Order establishing a Buy Clean Task Force at the end of 2021, as well as the Sustainable Products and Services

procurement rule and the Federal-State Buy Clean Initiative in 2023. The 2022 Inflation Reduction Act supports the Buy Clean effort by allocating over US\$ 9 billion in combined investments to transform federal procurement policy and reduce embodied carbon in construction materials and other products. While these federal policies will have a significant impact, most procurement dollars are spent at the state level and several states have adopted Buy Clean policies of their own, including California, which was an early mover with its 2017 Buy Clean California Act.

In Canada, the government launched its Greening Government Strategy in 2017, with commitments to disclose and reduce the embodied carbon for concrete used in major construction projects, and to conduct whole-building life cycle assessments for major buildings and infrastructure projects starting in 2025. Building on these early initiatives, the federal government has committed to launching a more comprehensive federal Buy Clean Strategy within its current mandate. Public institutions at subnational levels together spend around twenty times as much as the federal government on infrastructure projects. Some subnational jurisdictions, such as the City of Toronto and the province of British Columbia, have started green procurement initiatives of their own, but more remains to be done at the subnational level.

In Germany, the current federal government identified GPP as a goal in its coalition agreement and has recently undertaken stakeholder engagement on the creation of demand signals for green steel and cement. Several of Germany's public procurement policies already include environmental and sustainability measures.

However, a dedicated federal GPP policy is yet to be launched. At the European Union level, voluntary GPP criteria exist, and the European Commission has been working on adopting minimum mandatory GPP criteria in sectoral legislation. A few of the German states, such as Berlin, Rheinland-Pfalz, and Nordrhein-Westfalen have made independent efforts to adopt GPP at the subnational level.

While these national GPP policies will support industrial decarbonization, construction materials such as steel are globally traded products. Aligning green procurement practices across the Atlantic would greatly increase the potential impact that these policies could have on decarbonizing international supply chains. Numerous international initiatives on green public procurement have been stood up, bringing together a variety of public and private sector actors. However, this crowded field risks duplicating efforts and inhibiting harmonization. Harmonization is crucial but should happen centrally and at the working level.

For Green Public Procurement to have the greatest possible impact, we recommend that the governments of the United States, Canada, and Germany:



- 1 Set and agree to ambitious standards and definitions for low- and zero-carbon materials, following International Energy Agency guidelines;
- 2 Agree to accelerated timelines for the implementation of low-carbon standards, including interim milestones and targets for 2030 and 2050;
- 3 Set a tiered approach to procuring low- and zero-carbon materials;
- 4 Harmonize green public procurement policies at the subnational level;
- 5 Incorporate low- and zero-carbon materials definitions and standards into trade policies;
- 6 Facilitate capacity building and cross-border learning for jurisdictions at the subnational level;
- 7 Center inter-governmental harmonization of standards and requirements in the Industrial Deep Decarbonization Initiative.

Table 1: Overview of Green Public Procurement policies in the United States, Canada, and Germany

	 UNITED STATES	 CANADA	 GERMANY
Public procurement total expenditure and share of GDP	US\$ 650 billion (federal only); 11%	US\$ 32 billion (federal only); 13%	US\$ 327 billion (all levels of government); 17%
Emissions from public procurement*	150 million tonnes (federal only) ⁴	4.1 million tonnes (federal only)	125 million tonnes (estimate for all levels of government)
Economy-wide emissions reductions target	50-52% reduction by 2030 compared to 2005 levels; net zero by 2050	40-45% reduction by 2030 compared to 2005 levels; net zero by 2050	65% reduction by 2030 compared to 1990 levels; net zero by 2045
Targeted emissions reductions in government operations	40% reduction by 2025 compared to 2008 levels; Net-zero emissions from federal procurement by 2050	Net-zero government operations by 2050; Reduce absolute Scope 1 and Scope 2 emissions by 40% by 2025; Reduce the embodied carbon of the structural materials of major construction projects by 30%, starting in 2025	No target yet
Federal policies on GPP	Buy Clean Task Force; Inflation Reduction Act funding for procurement of low-carbon construction materials; Sustainable Products and Services procurement rule; Federal-State Buy Clean Partnership	Greening Government Strategy Greening Government Fund Standard on Embodied Carbon in Construction	General Administrative Regulation for Climate-Friendly Procurement; Programme of Measures on Sustainability; Assessment System for Sustainable Building Inclusion of green procurement principles in the Act Against Restraint of Competition and Federal Climate Change Act; EU directives and voluntary GPP principles
Important next steps	Integrated Buy Clean strategy; further movement of states and municipalities; harmonization across states and with other countries.	Federal Buy Clean Strategy with conditions on infrastructure funds transferred to other levels of government.	Implement the federal government's coalition commitment to adopt a federal green public procurement policy.
Examples of leading subnational jurisdictions on GPP (not exhaustive)	California; Colorado; Oregon; Minnesota; New Jersey; New York; Washington	British Columbia; City of Toronto; City of Vancouver	Berlin; Rheinland-Pfalz; Nordrhein-Westfalen
Membership of international initiatives	First Movers Coalition, GASSA, Greening Government Initiative, Industrial Deep Decarbonization Initiative	First Movers Coalition, Greening Government Initiative, International Deep Decarbonization Initiative	First Movers Coalition, GASSA, Industrial Deep Decarbonization Initiative

*These estimates are based on varying methodologies and in- or exclusions of government departments or organizations and product groups and might therefore not be directly comparable.



Introduction

At the 28th Conference of the Parties to the UN climate convention (COP28), nations once again convened to discuss how they can lower emissions and halt climate change. With temperatures rising every year and deadlines for net-zero targets rapidly approaching, governments will have to use all tools at their disposal to transition the global economy. Key to achieving our ambitious goals will be cross-border dialogue, learning and cooperation.

Governments hold immense spending power, which, when wielded strategically, can drive policy change. **Green public procurement (GPP) policies aim to directly reduce the emissions caused by public purchases, and they can have an outsized effect on the market**, incentivizing economy-wide decarbonization by helping low-carbon products become the default option in the marketplace. A number of jurisdictions

have recognized the opportunity that green procurement policies present and have begun setting standards or requiring the disclosure of emissions for government-funded construction projects.

In this paper we will explore how three countries that are leading the way on GPP are approaching this policy instrument, the unique challenges they face, and their plans for the future.

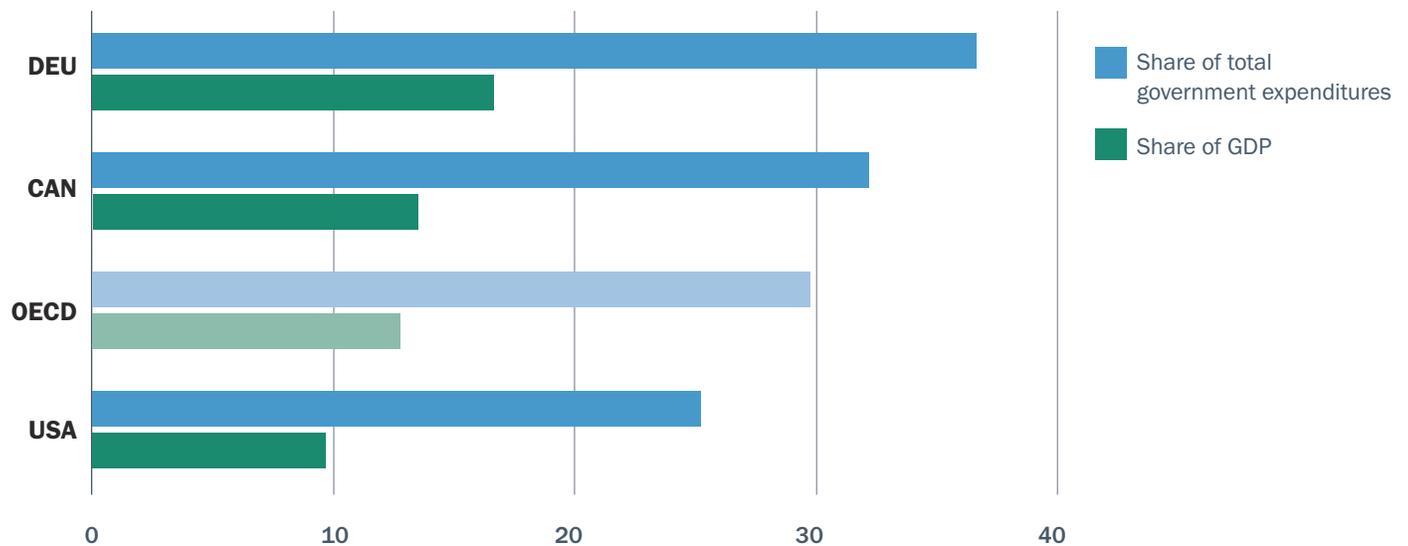
Germany, Canada, and the United States are among the world's largest economies with strong industrial sectors, and their trailblazing overhauls of industrial policy have made them global frontrunners on reducing associated emissions. The three countries also have federal systems, leading to similar structural challenges when it comes to implementing and regulating public procurement policy across governance levels.

Green procurement policy for construction materials is generally referred to in the United States and Canada as 'Buy Clean' policy, whereas the term green public

procurement is more commonly used in Germany and the European Union. This paper will showcase the three approaches of these jurisdictions, highlighting similarities and differences. Given their common political and economic structures, lessons learned can be applied across these countries and to others around the world.

In 2019, government procurement spending made up 17% of GDP in Germany, 13% of GDP in Canada, and 11% in the United States.¹ Aligning this spending with climate targets has the potential to shift economies and move us closer to mid-century net-zero targets.

Figure 1: Role of procurement spending in large economies¹



In heavy industrial sectors with significant government offtake, public procurement can create or shape new markets for low-carbon products. In Canada, for example, government spending comprises almost one third of both steel and cement markets.² For these commodities, full decarbonization will mean the adoption of cleaner fuels and technologies, such as electrification, renewable hydrogen, alternative chemistries, or carbon capture, and consequently requires significant investment. By setting standards to procure only low-carbon steel and cement (as well as other construction materials), **governments can create demand for low-carbon products and encourage industries to invest in decarbonization.**

In a number of respects, Buy Clean policies can be considered purely domestic policymaking. However, many of the materials involved (steel, glass, aluminum) are globally traded commodities with complex supply chains, and, therefore, the greater alignment countries can create in their procurement of low-carbon materials, the greater the market power that can be leveraged.

In June 2023, the Transatlantic Climate Bridge Conference brought together policymakers, experts and stakeholders for a series of events in Germany, the United States, and Canada, to stimulate discussion and learning between national and sub-national actors.³ This paper builds on that work and aims to advance transatlantic cooperation on green public procurement.

In addition to exploring the individual approaches of Canada, Germany, and the United States, this paper highlights the importance of coordination and examines initiatives currently seeking to bring countries and the private sector together around common standards and approaches. We also offer a set of recommendations on how to best leverage these existing initiatives and ensure a strong foundation of transatlantic cooperation that benefits Buy Clean policies domestically and strengthens our trading ties.



Green Public Procurement in the United States



Government spending power

At the end of 2021, President Biden announced a Federal Sustainability Plan and related Executive Order establishing a **Buy Clean Task Force**. The task force includes representatives from agencies across the federal government which, as a whole, accounts for **purchasing power that amounts to over US\$650 billion annually**.⁵ That first meeting of the task force represents the latest step in what has been a years-long process to utilize public procurement to drive down pollution in the United States. Leveraging the massive amount of public procurement power is a critical tool and could be a game changer for decarbonizing heavy industry domestically with implications for industries across the globe.

While federal government purchasing power is certainly sizeable, **most procurement decisions are made at the state level**, and state procurement is powerful in its own right. For example, the state of Washington alone spent approximately US\$94 billion on construction between 2008 and 2018.⁶ States have also proven to be the laboratories of Buy Clean policy development, with multiple states putting together efforts on standards, transparency, and reporting over the last six years. These efforts have refined which materials and projects should be covered and how industry can and should comply.



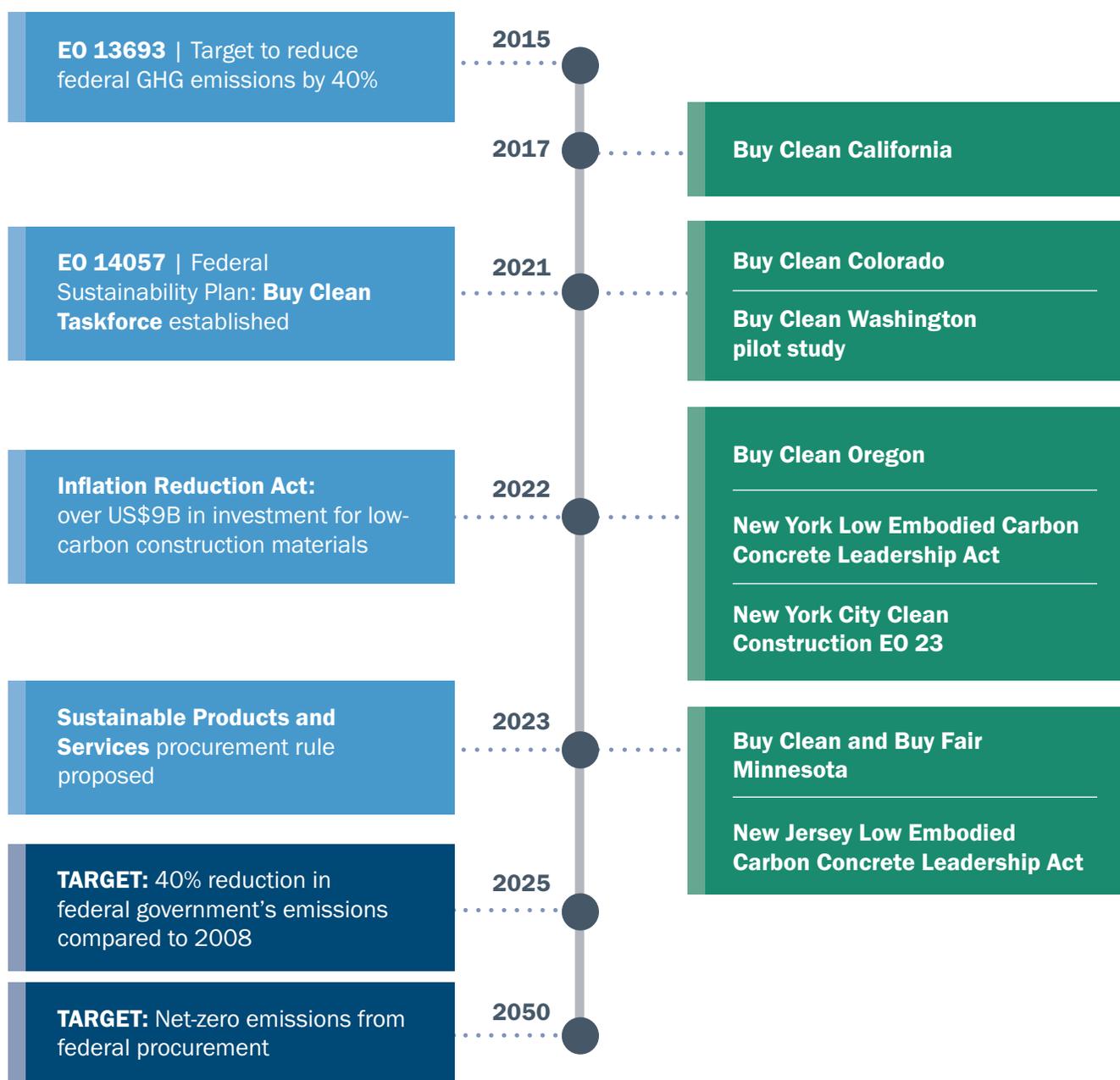
Emissions from heavy industry—specifically steel and cement—account for roughly 15% of global greenhouse gas emissions, and the U.S. is the fourth largest producer and consumer of steel and cement in the world.⁷ A Buy Clean policy in the U.S. is poised to have a significant impact on domestic carbon emissions. Analysis has shown that implementing a Buy Clean standard could lead to reductions of tens of millions of tonnes of emissions annually—equivalent to the pollution associated with more than 6 million gas-powered cars annually.⁸

Nearly half of cement produced in the U.S.—and a quarter of steel—is purchased with public dollars.⁹

This supports a significant amount of jobs and local economic activity. In 2022, the cement and steel industries employed roughly 219,000 and 131,000 people respectively.¹⁰ The future of these jobs depends on the competitiveness of these industries. A Buy Clean policy supports these industries as they invest in decarbonization.

Policy at the federal level

Figure 2: Buy Clean policy developments in the United States





In February 2015, building off Executive Order 13514 from 2009, President Obama signed Executive Order 13693 which established a target to reduce federal greenhouse gas emissions by 40% over the next decade, and increase the share of renewable energy consumption from the federal government to 30%.¹¹ This action was far from the country's first on procurement. Going back to 1993, President Clinton signed an Executive Order to require agencies to align procurement policies with recycling laws normally applied to the private sector.¹² Over the next 15 years, the U.S. government has evolved to connect procurement with energy efficiency initiatives, bio-based products, and electronics recycling.

President Biden has taken this effort much further than his predecessors. In December of 2021, he signed Executive Order 14057 creating a **Federal Sustainability Plan** that established a target to reach net-zero emissions from federal procurement by 2050, and created the nation's first Buy Clean Task Force.¹³ The **Buy Clean Task Force**, as mentioned above, was officially established by the White House's Council on Environmental Quality and Office of Domestic Climate Policy. The task force is charged with developing recommendations to "expand consideration of embodied emissions and pollutants of construction materials" in federal procurement. This includes identifying priority construction materials to be covered under a Buy Clean policy, increasing transparency of embodied emissions through Environmental Product Declarations, and launching pilot programs that incentivize clean federal procurement.

The **Inflation Reduction Act** – the U.S.'s premier piece of climate legislation, passed in 2022 – contains over US\$9 billion in investments to transform federal procurement policy and reduce embodied carbon in construction materials and other products. This includes:

- US\$2.15 billion to the General Services Administration (GSA) to expand procurement of low-carbon materials for the construction and renovation of GSA buildings.¹⁴
- US\$2 billion to the Department of Transportation to provide incentives for using low-embodied carbon construction materials in federal highway projects.¹⁵
- US\$250 million toward an Environmental Product Declaration (EPD) Assistance program administered by the Environmental Protection Agency, which will provide grants and technical assistance to develop, measure, and standardize EPDs.¹⁶
- A US\$100 million program to the Environmental Protection Agency to identify and label construction materials and products with substantially lower levels of embodied carbon.¹⁷

The Biden Administration proposed the **Sustainable Products and Services procurement rule** in August 2023, an amendment to part 23 of the Federal Acquisition Regulation to increase focus on environmental and sustainability concerns, and create a new requirement for "agencies to procure sustainable products and services to the maximum extent possible." The rule directs agencies to follow the Environmental Protection Agency's recommendations with over 40 standards and ecolabels for product and service categories.





Policy at the subnational level

States also play a significant role in administering clean procurement policies. The Biden Administration launched the **Federal-State Buy Clean Initiative** in May 2023, aiming to facilitate partnership between states and the federal government on clean procurement.

> CALIFORNIA

In 2017, California passed the **Buy Clean California Act**, leading the way on state-level public procurement policies.¹⁸ The rule sets Global Warming Potential (GWP) limits based on embodied carbon emissions used in public works projects. These requirements pertain to just four product categories: structural steel, concrete reinforcing steel, flat glass, and mineral wool board insulation. EPDs are used both to determine GWP limits for products, and to be submitted by agencies to assess compliance.

> COLORADO

Colorado passed its **Buy Clean Colorado Act** in 2021, establishing maximum GWP limits using EPDs for seven categories of eligible materials, including asphalt, concrete, steel, and others.¹⁹ The limits apply to state public projects with costs over US\$ 500,000 and are administered by the state's Department of Transportation and Office of the State Architect.

> OREGON

Buy Clean Oregon was signed into law in 2022, tasking Oregon's Department of Transportation with creating a program to reduce greenhouse gas emissions of concrete, asphalt, and steel in the state's transportation system.²⁰ The law also requires the Oregon Department of Transportation to conduct life cycle assessments for certain construction and maintenance activities, however, it notably does not set any reduction or embodied carbon limits on materials.

> WASHINGTON

While the state was ultimately unable to pass its Buy Clean and Buy Fair Act in 2021, they were able to include a **Buy Clean Buy Fair pilot study** in 2021 budget provisions.²¹ This study required creating a reporting database to collect environmental and labor information on state construction projects, and conducting up to 10 pilot projects to test the reporting requirements. The "Buy Fair" components of this study, which require the collection of health and worker data in addition to environmental information, were pioneered by Washington state and aim to promote high labor standards in manufacturing facilities.

> MINNESOTA

Minnesota passed the **Buy Clean and Buy Fair Minnesota Act** in the summer of 2023.²² The law first requires the state to create an Environmental Standards Procurement Task Force to examine issues surrounding compliance, material and project eligibility, and more. It also requires the establishment of a pilot program for vendors to submit life cycle assessments for emissions of selected products. Finally, the law sets maximum GWP limits based on EPDs for concrete used in buildings and carbon steel rebar, structural steel, asphalt, and concrete pavement used in transportation projects.

> NEW JERSEY AND NEW YORK

In 2021 and 2022, the state of New York and the city of New York passed their own cement specific version of green public procurement, alongside broader procurement goals in New York State and New York City. The **Low Embodied Carbon Concrete Leadership Act** moves to design a system for state agencies to award contracts based on the climate performance of the concrete in addition to price.²³ This effort aims to drive emissions down from the most common construction material that just so happens to be both energy and emissions intensive.



Looking ahead: Next steps on Buy Clean in the U.S

Thanks to the passage of the Inflation Reduction Act, the Sustainable Federal Acquisition Regulation proposed rule, and the Buy Clean Task Force and its associated executive order, the federal government is poised to integrate Buy Clean as a policy and principle across public procurement. Three key items are needed to ensure movement continues in the right direction:

- **The launch of an integrated Buy Clean strategy:** Multiple agencies, notably the Department of Transportation and General Services Administration, have incorporated Buy Clean preferences into their procurement either via specific grant programs or through pilot projects. The work of the Buy Clean Task Force should aim to incorporate learning from these efforts and then subsequently launch an administration-wide strategy on Buy Clean that centers on transparency and disclosure, but with a clear target for deployment of standards in a few years.

- **Further movement of states and municipalities:** As mentioned above, the federal government cannot move the public procurement behemoth alone. It will be incumbent upon states to make further progress in order to achieve the country's Buy Clean goals. This means that states that have launched pilot projects and mandate transparency must now move towards standards, while other states must now launch their own Buy Clean policies.
- **Harmonization across states and with other nations:** Buy Clean will work best when it aims high and has clear direction. This will only happen when transparency mandates and standards rely on harmonized reporting mechanisms, such as Environmental Product Declarations, and similar criteria for each industry.





Green Public Procurement in Canada

Government spending power

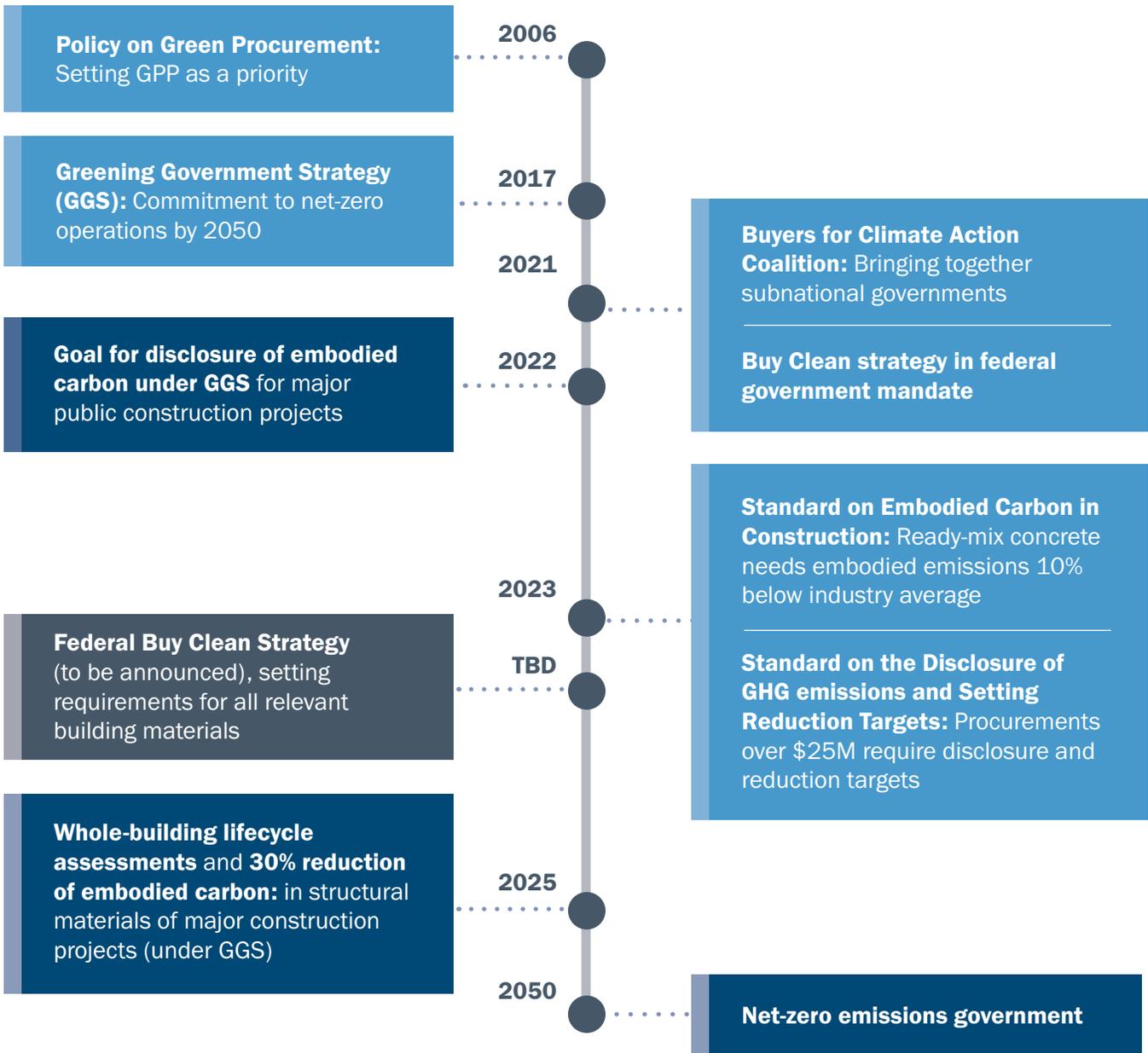
Every year, the federal government of Canada purchases C\$22 billion (around US\$16 billion) worth of goods and services.²⁴ These purchases not only have a significant economic footprint, but also produce substantial greenhouse gas emissions, contributing to climate disruption. By the government's own estimates, the products and services it bought between 2016 and 2020 were responsible for an annual 4.1 million tonnes of CO₂e.²⁵

This does not include the emissions from energy used to heat and power government buildings or from government vehicles. The public purse's climate footprint is even greater when we consider governments at all levels, including municipalities, provinces, territories, and crown corporations.



Policy at the federal level

Figure 3: Buy Clean policy developments at the federal level in Canada



The Canadian federal government has taken an interest in green public procurement for over 15 years, adopting its first policy as early as 2006. The policy contained no specific requirements for the emissions of procured commodities, but did make the important step of establishing green procurement as a priority.

In 2017, the federal government launched the **Greening Government Strategy**, committing to net-zero operations across all federal departments by 2050.

Beyond the headline target, this strategy established clear guidelines and policies for buildings, fleets, and other products and services. To support the implementation of the strategy, the government created the **Greening Government Fund**. All federal departments that generate more than a kilotonne of emissions per year through their staff's air travel have to pay into the fund, which is used to support greening government initiatives.



Under the umbrella of the Greening Government Strategy, some important first strides have been made in the procurement of lower-carbon building materials:

- The strategy committed to the **disclosure of embodied carbon** of the structural materials of major construction projects by 2022 (a target that was reached for concrete, but not for other materials) and a subsequent 30% reduction of embodied carbon in these materials, for projects starting in 2025.
- It also commits to conducting **whole building life cycle assessments** by 2025 for major buildings and infrastructure projects.
- The Treasury Board **Standard on the Disclosure of Greenhouse Gas Emissions and the Setting of Reduction Targets** (April 2023) outlines that federal government procurements over C\$25 million should incentivize suppliers to disclose their greenhouse gas emissions and to set reduction targets.²⁶

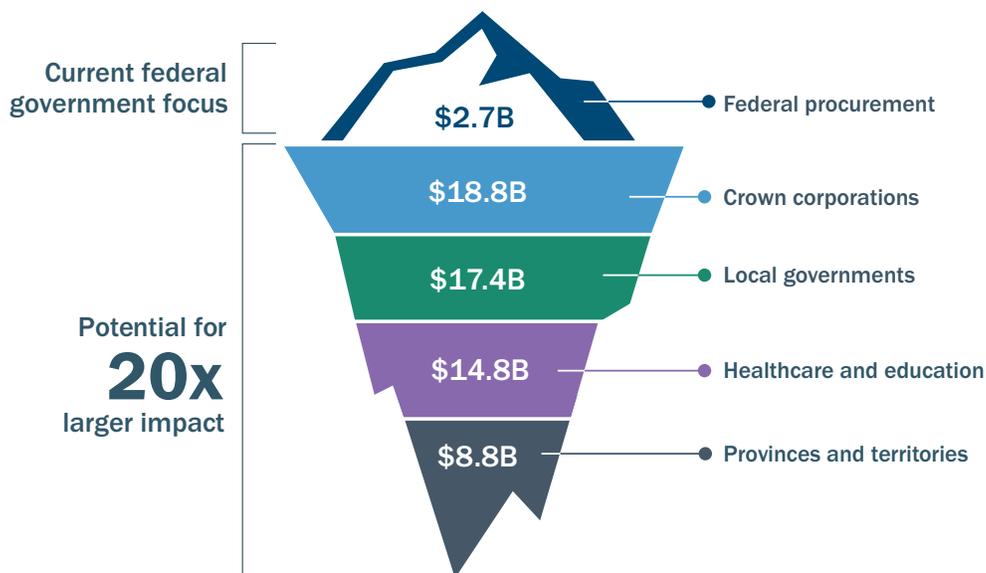
- The **Standard on Embodied Carbon in Construction** requires that embodied emissions in ready-mix concrete used in procurements from 2023 onwards are at least 10% below the regional industry average.

The next important step is for the Canadian federal government to build on these initial commitments and launch a comprehensive **Buy Clean Strategy**, covering key construction materials and setting clear standards for life cycle embodied emissions of new construction projects. Such a strategy was part of the current government’s election platform and three ministers were formally tasked with developing this strategy at the start of the government’s mandate in December 2021. However, it has not been launched as of yet.

Policy at the subnational level

Although a comprehensive Buy Clean Strategy at the federal level would be a great step forward, it only gets to the tip of the iceberg of green procurement’s potential in Canada. While the federal government spends an annual C\$2.7 billion on infrastructure, public institutions at other levels together spend about 20 times that.²

Figure 4: Breakdown of public infrastructure spending by level of government and public agencies in Canada²





Some provinces and municipalities have started adopting GPP policies of their own. To facilitate cross-government learning, the federal government founded the **Buyers for Climate Action coalition** in 2021, funded through the Greening Government Fund. The coalition brings together subnational governments that have committed to net-zero operations by 2050. Current members of the coalition include British Columbia, Québec, Vancouver, Toronto, and Montreal.

BRITISH COLUMBIA

In its climate plan, the Government of British Columbia committed to developing a **Low Carbon Building Materials Strategy** by 2023, which would initially emphasize public sector buildings and set embodied carbon targets for public sector buildings by 2030.²⁷ Since 2007, the government of British Columbia has required new public sector buildings to be certified as LEED Gold.²⁸ The current LEED standard allows developers to earn points towards that certification by using lower-carbon materials, such as timber or Portland Limestone Cement.

CITY OF TORONTO

Since 2010, the City of Toronto has set sustainable design and performance standards for new private and city-owned developments.²⁹ The newest version of this Toronto Green Standard (TGS V4) came into effect in May 2022. The standard distinguishes between a tier of mandatory and a tier of voluntary requirements for all buildings, whether privately or publicly owned, and sets specific requirements for city-owned buildings, which include standards for embodied emissions. Developers of city-owned buildings must conduct an upfront embodied emissions assessment and must specify low-carbon alternatives to use in the building project.³⁰ The Standard also sets a maximum emissions intensity for city-owned buildings of 350 kg CO₂e/m².

International Engagement

The federal government of Canada co-founded the Greening Government Initiative together with the United States in 2021. Canada is also an active member of the Industrial Deep Decarbonization Initiative and joined the First Movers Coalition as a government partner in January 2023.

Looking ahead: next steps on Buy Clean for Canada

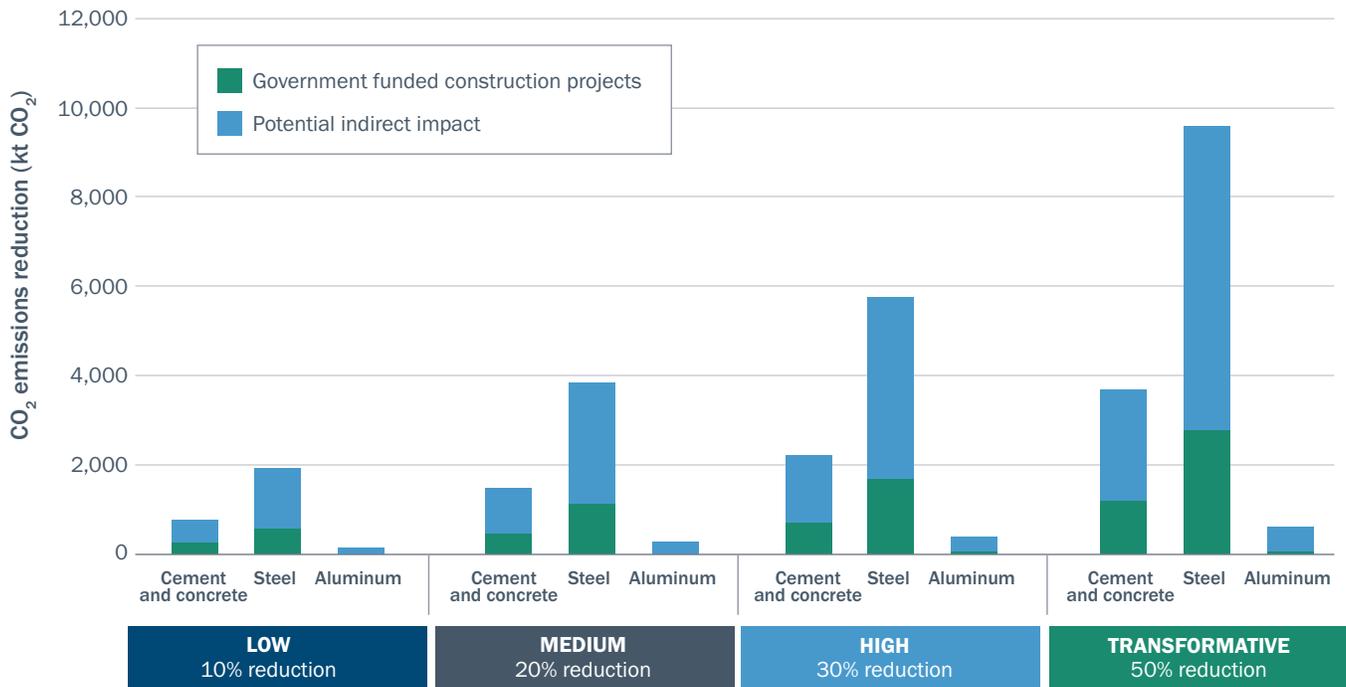
The next important step for the Canadian federal government is to launch a comprehensive Buy Clean strategy, setting requirements for key building materials in all federally funded construction projects. However, direct federal purchases are only part of the puzzle. The federal government should extend requirements to other levels of government, for example by mandating Buy Clean requirements when the federal government transfers funds to provinces for infrastructure projects and by extending Buy Clean to crown corporations.

In parallel, provinces, territories, and municipalities need to independently make progress on Buy Clean policies, so that the full weight of public spending tips the scale in favor of low-carbon building materials.

Implementing ambitious Buy Clean policy across all levels of government in Canada could have an enormous impact, even if just for select materials. In a low-ambition scenario, where governments buy steel, concrete, and aluminum with 10% lower embodied carbon than the current baseline, 800 kilotonnes of CO₂e would be avoided each year.³¹ However, if the government adopts an ambitious policy, requiring 50% lower embodied carbon for these materials, emissions reductions could add up to 4 million tonnes CO₂e annually. The indirect effects could be even greater, with a potential to reduce emissions equivalent to taking 3 million cars off the road.



Figure 5: Annual avoided emissions under four Buy Clean scenarios for concrete, steel, and aluminum²



Although Canada is not as far ahead as some of its allies on using procurement as a tool for decarbonization, the past years have seen promising steps, such as the Standard on Embodied Carbon in Construction and mandating whole-building life cycle assessments.

A net-zero economy by 2050 requires meaningful investment in the 2020s. Public procurement requirements can support early movers and create markets for low-carbon products that do not yet exist. The time to act is now.





Green Public Procurement in Germany

Government spending power

The German government spends a significant portion of its annual GDP on product procurement. **Each year, public contracting authorities spend €300 billion (~US\$ 327 billion), amounting to around 17% of the country's GDP.**¹ These purchases contribute to a large share of overall German greenhouse gas emissions. The most recently available estimates show that German public spending amounts to around 12% of the country's annual emissions, with around 28% of the country's construction-related emissions coming from the public sector.³²

Tracking public procurement in Germany is complex, as the legal landscape is divided not only across various levels of government, but also among different bodies of law. Competition law regulates procurements valued higher than EU thresholds, whereas procurements below EU thresholds pertain to budgetary law. For procurements below the EU threshold, governance at the subnational level comes into play, where federal German states—*Bundesländer*—are able to regulate their procurements through state-level laws instead of those at the federal level.³³ Indeed, all 16 German states have



their own legal and policy frameworks for procurement, with Bavaria being the only state without its own procurement law, where instead federal law applies.³⁴ Further, the municipal level is not always required to adhere to the regulations of the *Bundesländer*, which, in turn, may have different regulations from the federal level. This creates confusion for market participants who must research the necessary regulations across governance levels, a process that has yet to be streamlined and is rife with data access difficulties.

Policy at the federal level

Germany is farther behind the Buy Clean landscapes of Canada and the U.S. While **the current federal government has identified GPP as a goal in its coalition agreement** and made positive steps towards a more ambitious federal policy, at this time Germany does not have a national GPP target.³⁵ However, recent activities suggest that such a target could be on the horizon. The Federal Ministry for Economic Affairs and Climate Action has recently undergone a stakeholder engagement process with industry, science, and civil society on the definitions, measurement methods, and creating demand signals for green steel and cement.^{36,37} Strengthening climate-friendly procurement was among the focus points of the engagement and is a priority of the Ministry.

Although lacking a dedicated federal GPP policy, Germany has various environmental and sustainability measures woven into its public procurement policies.

Domestic procurement legal landscape

Act Against Restraint of Competition (*Gesetz gegen Wettbewerbsbeschränkungen – GWB*)

- This 1958 law established Germany’s procurement principles. A 2016 reform established that environmental and sustainability criteria can be considered in the procurement process.³⁸

General Administrative Regulation for Climate-Friendly Procurement (*Allgemeine Verwaltungsvorschrift zur Beschaffung klimafreundlicher Leistungen – AVV Klima*)

- A January 2022 regulation that applies to federal procurement and specifies how climate measures must be taken into account in public procurement processes.³⁹ Specifically, an assessment of the energy efficiency and a forecast (as far as reasonably possible) of greenhouse gas emissions over the life cycle of the good or service must be provided and be considered by the procuring authority.
- It further includes a list of climate-harmful products that are not allowed to be procured (including disposable tableware and air conditioning appliances that use certain cooling agents).⁴⁰

Assessment System for Sustainable Building

(*Bewertungssystem Nachhaltiges Bauen für Bundesgebäude – BNB*)

- The Assessment System for Sustainable Building (BNB) is a complementary instrument to the 2001 Guideline for Sustainable Building of the Federal Building Ministry. Since 2013, new construction projects and complete refurbishments of federal buildings valued at over €2 million must adhere to the BNB “silver” standard.⁴¹ The BNB mandates providing a life cycle assessment that includes greenhouse gas emissions from construction materials. The federal government is due to further develop the BNB by 2025 in order for it to support greater demand for low-emissions construction materials.⁴²

Programme of Sustainability Measures, as part of the German Sustainability Strategy

- Stipulates that federal authorities must source products with the German Blue Angel eco-label wherever possible. The Blue Angel sets standards for environmentally friendly goods and services.⁴³

Federal Climate Change Act

- Stipulates that procurement offices, when considering two or more options, shall give preference to products that achieve the goal of reducing life cycle greenhouse gasses at the lowest cost, taking into account life cycle costs as well as the economic costs of climate protection.⁴⁴

It must be stressed that the above legal measures do not constitute a comprehensive, mandatory GPP policy. Indeed, where climate and environmental considerations have been incorporated into existing legislation, such as in the GWB and AVV Klima, the language is oftentimes vague and indicates an encouragement rather than a requirement. Further, specific and mandatory procurement policies on heavy industry products, such as steel and cement, are notably absent.

Policy at the European Union level

Germany’s public procurement law must also interact with legislation at the EU level. The **European Commission’s current public procurement strategy** was established in 2017 and includes six strategic policy priorities, the first of which is “ensuring wider uptake of innovative, green and social procurement.”⁴⁵ While noted as a key part of the EU’s transition to a resource-efficient economy, GPP is currently voluntary at the EU level and member states can determine for themselves how (and whether) to apply the EU GPP policies and criteria. The Commission is proposing minimum mandatory



GPP criteria and targets in sectoral legislation, but at the moment there is only the Commission-developed voluntary criteria.^{46,47} With over 250,000 public authorities in the EU spending around 14% of the bloc's GDP (around €2 trillion, or US\$ 2.2 trillion) on procurement every year, mandatory GPP criteria would have an immense impact on the EU's ability to advance its environmental and climate goals.⁴⁸

Beyond the voluntary GPP criteria, there are three main legal instruments that regulate public procurement in the EU: Directives 2014/23, 2014/24 and 2014/25. Established in 2014 (with the mandate to be adopted into national law by all Member States by 2016), the directives were designed to simplify the bloc's public procurement procedures and make them more flexible. The principles guiding the directives are transparency, equal treatment, open competition, and sound procedural management.⁴⁹ Public contracts in the EU covered by these directives amount to €420 billion (~US\$ 455 billion).⁴⁸

Directive 2014/23 – Award of concession contracts

Directive 23 sets out rules for procurement by public sector contracting authorities and contracting entities in the utilities sector by a means of concession.^{48,*} The directive aims to establish a clear legal framework and guarantee access to the concessions market for all European businesses.

Directive 2014/24 - Public procurement

Directive 24 establishes purchasing procedures for public buyers.⁵⁰ It stipulates that a contract is to be awarded to the most economically advantageous tender on the basis of lowest price or the best price-quality ratio, which can include environmental considerations. The directive requires national authorities using public procurement to treat all applicants equally and that they may not discriminate between them, as well as to be transparent in their dealings.⁵⁰

Directive 2014/25 - Procurement by entities operating in the water, energy, transport, and postal services sectors

Directive 25 establishes rules on the award of public contracts by entities in the water, energy, transport and postal sectors.⁵¹ Its rules are based on Directive 24 with additional specifications relating to the nature of these sectors.

Thresholds

Member states must adhere to EU law when tenders exceed a minimum monetary threshold and when they are presumed to be of cross-border interest.⁴⁹ The European Commission provides a list of current thresholds, which depend on the type of contract, sector, and corresponding directive.⁵² The thresholds are updated regularly.

Figure 6: EU thresholds for public procurement⁵³

What contracts need to be advertised throughout the EU?

EU thresholds for procurement procedures since 1 January 2020:



*Concession contracts entail a contracting authority or entity entrusting another company (or multiple companies) to provide or manage services.



Policy at the subnational level

> BERLIN

The city-state of Berlin stands out as the German state with the greatest ambition in GPP. The capital of Germany, Berlin has a high level of both influence in the country as well as economic power, with its annual budget on procurement between €4 and 5 billion (~US\$4.4 to US\$5.5 billion).⁵⁴ With the goal to achieve climate neutrality by 2045, Berlin perceives procurement to be a key lever to achieve this goal.³⁶ The environmental component of procurement tenders is regulated by the **Administrative Regulation on Procurement and Environment**, which establishes minimum environmental criteria for the procurement of certain products. Procurers are required to provide environmental criteria for all construction tenders above €50,000. A 2016 study reveals that these environmental considerations cut Berlin's emissions by 47%.³⁶

> BUNDESLAND RHEINLAND-PFALZ

Bundesland Rheinland-Pfalz is also a German state leader in GPP. With an explicit goal to pursue the goals of sustainable development through public procurement, the government's Guidelines for Achieving a Climate-Neutral State

Administration for Rheinland-Pfalz include a variety of climate, environmental, and circular economy guidelines for public authorities to adhere to in their considerations of tenders. Among these guidelines are awareness-raising and training of employees in the area of procurement law, reusing or repairing products before procuring new ones, giving preference to energy-efficient appliances (if equally suitable), and strategically positioning climate-friendly products in product displays.⁵⁵

The state also provides an up-to-date list of sustainable products and companies and includes a measure on regularly raising the standards for climate-friendly products.⁵⁵

> FEDERAL STATE NORDRHEIN-WESTFALEN

Federal state Nordrhein-Westfalen also goes beyond federal German GPP criteria. In its Circular Economy Act from 2022, the Bundesland stipulates that public authorities must give preference, when legally feasible, to products that meet a variety of environmental and sustainability considerations.⁵⁵

International Engagement

Germany is a member of the International Deep Decarbonisation Initiative and supports international cooperation on establishing ambitious public and private sector procurement targets.⁵⁶ At the city-level, Essen is a member of DeCarb-Pro, an initiative that aims to reduce carbon emissions from procurement by local authorities in Northwest Europe.⁵⁷ The aim of the initiative is to implement carbon pricing in tenders by local authorities.





Looking ahead: next steps on GPP for Germany

The current governing coalition seeks to transform procurement regulations to make them more efficient and easier to understand, a resounding demand from participants in the 2023 stakeholder engagement workshop by the Federal Ministry for Economic Affairs and Climate Action.

Further, an inter-ministerial committee dedicated to the topic of GPP was founded in Germany in 2022. The **Inter-Ministerial Committee for Sustainable Public Procurement** (*Interministerieller Ausschuss für nachhaltige öffentliche Beschaffung* – IMA nöB) gathers federal ministries as well as the German Environment Agency (*Umweltbundesamt*) and the Competence Center for Sustainable Procurement (*Kompetenzstelle für nachhaltige Beschaffung*). The goals of the committee include making public procurement regulations easier for market participants and streamlining them across ministries, defining a set of GPP rules at the federal level to create a minimum standard for all federal offices, and strengthening cooperation with municipalities.⁴⁵

Moving ahead, **the German federal government should establish a comprehensive GPP strategy that includes a national target for publicly procuring climate-friendly goods and services.** This mandate should have a minimal threshold by which subnational jurisdictions in Germany must abide. Further, this strategy must include specific GPP criteria for the heavy industry sector and require public contracts, especially for construction projects, include a percentage of near-zero and low-emission products.

German Bundesländer, municipalities and cities should follow a similar path as the federal government and implement mandatory targets for GPP, especially for heavy industry. The IMA nöB could be a promising space to facilitate this work as well as the close coordination between national and subnational jurisdictions to mutually reinforce each other's GPP policies.





Improving Transatlantic Cooperation

Canada, the U.S., and Germany have been moving at different paces and scales of ambition, but their ultimate goal is similar– to leverage government spending to decarbonize their heavy industry sectors and reduce the emissions footprint of government-funded construction.

However, while the core of these policies are directed towards domestic spending and local producers, the nature of many construction materials as globally traded products produced by multinational companies (e.g., steel and cement) means that transatlantic cooperation and alignment on procurement practices has huge value.

The greater the alignment and harmonization of standards for low-carbon materials, the greater the impact of these policies.

With the goal of driving deep decarbonization of heavy industries that account for a significant share of global emissions, aligned Buy Clean policies and private-sector action will expand the potential market beyond borders, increasing trade alignment opportunities and creating even greater market certainty for industries looking to make high-cost moves to decarbonize.

If we fail to harmonize the standards, measurements and definitions that underpin Buy Clean policies, we risk undermining these opportunities - fragmenting the low-carbon material landscape and creating more hesitancy among industry actors who will have to choose between emissions reductions and market access.

The work has already begun in earnest. Table 2 highlights the variety of different initiatives that have been launched to facilitate international cooperation on standards and approaches while creating private-sector buy-in.

These initiatives vary in their target, level of ambition and the actors involved, and may have different roles to play in activating private and public sector actors. However, counterintuitively, having such a large number of initiatives working on harmonization, especially among governments, risks duplicating and inhibiting efforts. We therefore recommend **centering inter-governmental harmonization of standards and requirements in the Industrial Deep Decarbonization Initiative.**

Table 2: Existing international initiatives working on green procurement of construction materials

INITIATIVE	PUBLIC/ PRIVATE	MEMBERS	PURPOSE
ConcreteZero	Private	35 private companies that procure concrete	A network of private procurers of concrete that aims to send a strong demand signal to shift global markets towards net-zero concrete
First Movers Coalition	Public-private	Over 60 multinational corporations and thirteen government partners, including Canada, the United States, and Germany	To leverage the purchasing power of its members to create markets for decarbonized industry, with sector-specific work plans
Global Arrangement on Sustainable Steel and Aluminum (GASSA)	Public	United States, European Union	Meant to be a carbon-based sectoral trade agreement for steel and aluminum. Negotiations have been ongoing since late 2021
Greening Government Initiative	Public	49 countries, including the United States and Canada	Meant to serve as a community of practice for governments, sharing lessons learned on greening government operations and procurement
Industrial Deep Decarbonization Initiative (IDDI)	Public-private	United Kingdom, India, Germany, Canada, the United States, Japan, Saudi Arabia, Sweden, and the United Arab Emirates	Members of the IDDI sign on to a Green Public Procurement Pledge, committing to targets for green procurement. The Initiative also functions as a working-level platform to harmonize standards and data requirements
ResponsibleSteel	Private	Over 140 members, including businesses from the steel supply chain, civil society groups, and other interested stakeholders	A multi-stakeholder standard and certification initiative. Steel companies can get certified for their compliance with the standard, indicating they meet a set of principles, including relating to their emissions
SteelZero Initiative	Private	42 private companies that procure steel	A network of procurers of steel that aims to send a strong demand signal to shift global markets towards net-zero steel. Organizations that join SteelZero make a public commitment to buy and use 50% low-emission steel by 2030, and work towards using 100% net-zero steel by 2050

Below we highlight three of these initiatives in more detail. These are leading examples of effective action covering national government, international governance, and the private sector.

Greening Government Initiative

The United States and Canada have been working together to share best practices on their greening government strategies. **The Greening Government Initiative, established by the U.S. and Canadian governments in 2021, now brings together 49 countries.**⁵⁸ It is meant to serve as a community of practice, sharing lessons learned on greening government operations and procurement.⁵⁹ The initiative holds four meetings per year and is open to any interested government, regardless of their level of progress on greening government initiatives.

First Movers Coalition

The First Movers Coalition is a coalition of over 60 multinational corporations using their purchasing power to create markets for decarbonized industry, coordinated through the World Economic Forum. The coalition establishes sector-specific work plans and aims to support member companies in implementation through a range of activities including knowledge development and sharing and connecting buyers to suppliers. Sectors covered so far include steel and cement and concrete, among others. Governments can join the initiative as a partner, endorsing and supporting the coalition's efforts. There are currently thirteen government partners, including Germany, Canada and the United States.

While the growth of activity in this space is encouraging, it is important to recognize the different roles and audiences these organizations and initiatives have. It is more important than ever that we avoid duplication and fragmentation of efforts. With this in mind, our recommendations focus on increasing this harmonization and coming together to collectively resource singular initiatives that can deliver the greatest results.

Industrial Deep Decarbonization Initiative

The Industrial Deep Decarbonization Initiative (IDDI) was established in 2021 by the United Nations Industrial Development Organization and the Clean Energy Ministerial with the aim of leveraging public purchasing power to create a market for low-emission steel, cement, and concrete.⁶⁰ The initiative is led by the United Kingdom and India. Germany, Canada, and the U.S. are members, alongside Japan, Saudi Arabia, Sweden, and the United Arab Emirates. **The IDDI's Green Public Procurement Pledge**, signed by member governments,

includes commitments to require low-emission steel, cement, and concrete in public construction projects by 2030 and to require monitoring and disclosure of embodied carbon in publicly-funded construction projects by 2025. In addition to establishing future milestones, the Initiative facilitates collaboration on data collection and harmonization of standards.⁶⁰

Cross-market comparability of standards for low-emissions building materials and procurement is crucial in creating certainty for industry and investors as well as public and private buyers. As a working-level platform, the IDDI has the potential to shape technical standards and ensure successful and harmonious implementation of green procurement policy across jurisdictions. However, it will be important for the Initiative to expand its membership beyond the initial nine countries to increase its impact and enable harmonization across global markets.

Action at COP28

Alongside tense negotiations and major commitments on renewable energy and adaptation financing, the issue of green public procurement took its rightful turn in the headlines. As part of the IDDI, the governments of Canada, Germany, the United Kingdom, and the United States strengthened their commitments to leveraging the power of public dollars on driving emissions down in steel, cement and other heavy industries. In particular, these nations pledged to adopt timebound commitments to procure low-emission steel, cement, and concrete, as well as setting thresholds for whole-project life cycle assessments aimed at achieving net-zero buildings and infrastructure. They also agreed to support the development and use of harmonized emissions standards, and to transparently report on progress.

Additionally, this COP included landmark movement on the many pieces of industrial decarbonization. The first Trade Day at a COP was held to acknowledge the critical intersection of global trade policy with the climate crisis. A long held priority of the German government came to fruition as the Climate Club launched. The Club, co-hosted by Chile and Germany and including 36 nations as members, aims to support collaborative standards and strategy development for decarbonizing industry. Moreover, multiple sector-specific initiatives were launched, including the Industrial Transition Accelerator, the Cement and Concrete Breakthrough, and the Steel Standards Principles.

Recommendations

To ensure the most effective green public procurement policies in Germany, Canada and the United States, and the greatest possible international market for low-carbon and net-zero materials, we recommend the following actions:

- 1 Governments should set and agree to ambitious standards and definitions** for low- and zero-carbon materials. These should follow International Energy Agency guidelines, including the sliding scale for the incorporation of scrap material.
- 2 Governments should agree to accelerated timelines for the implementation** of low-carbon standards. This must include targets for 2030 and 2050 with interim milestones every five years.
- 3 Governments should set a tiered approach** to procuring low- and zero-carbon materials. A percentage of procurement should be satisfied by only zero-carbon materials, and another percentage should be satisfied by low-carbon materials. This approach should include a ratcheting mechanism whereby the percentages of low- and near-zero materials increase over time.
- 4 Harmonize green public procurement policies at the subnational level.** Subnational jurisdictions across the Atlantic would benefit from having harmonized policies, especially when their jurisdictions' policies are more ambitious than those of their national governments.
- 5 Incorporate low- and zero-carbon materials definitions and standards** into trade policies, including the Global Arrangement on Sustainable Steel and Aluminum.
- 6 Governments should facilitate capacity building and cross-border learning for jurisdictions at the subnational level.** Subnational jurisdictions frequently lack the capacity and resources to engage in fruitful international exchanges of best practices. National governments can fill potential resource gaps for those subnational jurisdictions seeking to implement public procurement policies that go beyond the federal minimum requirements and connect them with ambitious and experienced jurisdictions in other countries.
- 7 To avoid duplication, center inter-governmental harmonization of standards and requirements in the Industrial Deep Decarbonization Initiative.** For the initiative to effectively deliver harmonized Buy Clean efforts it should:
 - Expand work to harmonize product emissions data and environmental reporting mechanisms for other construction materials, including aluminum, forest products, and glazing;
 - Coordinate work to harmonize product emissions data and reporting mechanisms with other international initiatives to avoid having duplicate, divergent standards;
 - Actively work to expand membership with additional states and jurisdictions;
 - Meet the commitment to develop green procurement guidance for member governments, and begin development of guidance to support commitments to adopt whole-project life cycle assessments to incentivize the procurement of other low- and near-zero emission construction materials.

Glossary

AVV Klima	<i>Allgemeine Verwaltungsvorschrift zur Beschaffung klimafreundlicher Leistungen</i> (General Administrative Regulation for Climate-Friendly Procurement)
BNB	<i>Bewertungssystem Nachhaltiges Bauen für Bundesgebäude</i> (Assessment System for Sustainable Building)
EPD	Environmental Product Declaration
FMC	First Movers Coalition
GASSA	Global Arrangement on Sustainable Steel and Aluminum
GDP	Gross domestic product
GGS	Greening Government Strategy
GHG	Greenhouse gas
GPP	Green public procurement
GSA	General Services Administration
GWB	<i>Gesetz gegen Wettbewerbsbeschränkungen</i> (Act against restraint of competition)
GWP	Global warming potential
IDDI	Industrial Deep Decarbonization Initiative
IMA nöB	<i>Interministerieller Ausschuss für nachhaltige öffentliche Beschaffung</i> (Inter-Ministerial Committee for Sustainable Public Procurement)
LEED	Leadership in Energy and Environmental Design

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