

Public Sector Practice

Target net zero: A journey to decarbonizing the public sector

Government organizations can shape decarbonization policies but also help reduce global emissions by transforming their own operations and supply chains.

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Under the 2015 Paris Agreement, 192 countries adopted a bold goal: to reduce greenhouse-gas (GHG) emissions enough to limit the rise of global temperatures in the 21st century to “well below 2°C above preindustrial levels” while working to limit global warming to 1.5 degrees Celsius. According to the agreement, based on the best available science, the world must reach net-zero GHG emissions early in the second half of the present century. That will require the transformation of economies and societies alike.¹

To date, 136 of the signatory countries, responsible for 83 percent of global emissions, have made net-zero pledges.² However, the latest *Emissions gap report* from the UN Environment Programme (UNEP) found that new and updated nationally determined contributions fall far short of the reductions required to meet the Paris Agreement’s goals. In fact, the UNEP found that current climate commitments would put the world on track for a temperature rise of 2.7 degrees Celsius during this century.³

As the world wrangles with how to amplify global decarbonization efforts, public-sector entities will

play an increasingly critical role not only in setting but also in realizing bolder agendas. Public-sector spending accounts for 47 percent of GDP in the European Union, 44 percent in the United States, 39 percent in Japan, and 18 percent in India. Reducing public-sector emissions could be a vital component of most national decarbonization strategies.⁴

Public procurement wields significant purchasing power: approximately 12 percent of GDP among the member countries of the Organisation for Economic Co-operation and Development (OECD).⁵ Public-sector entities could help to scale up solutions and to increase demand for low-carbon products and services by including their supply chains in decarbonization efforts.

Some governments have already acted to reduce emissions from their operations. However, many public-sector entities could do more to promote full decarbonization and fuel the worldwide transformation toward net zero (see sidebar “Ireland: Greening the public sector to foster broader decarbonization”).

¹ The text of the Paris Agreement, adopted December 12, 2015, is available on the UN website.

² Net Zero Tracker, accessed August 10, 2022.

³ “Updated climate commitments ahead of COP26 summit fall far short, but net-zero pledges provide hope,” UN Environment Programme, October 26, 2021.

⁴ “Government spending to GDP by country | G20,” Trading Economics.

⁵ “What is public procurement?,” Organisation for Economic Co-operation and Development, 2019.

Ireland: Greening the public sector to foster broader decarbonization

In July 2021, Ireland passed its Climate Action and Low Carbon Development Act to achieve climate neutrality by 2050.¹ The government introduced five-year carbon budgets for the entire economy, including emissions ceilings for each sector. It has set itself two core targets: to reduce total emissions by at least 51 percent and to improve the public sector’s energy efficiency by 50 percent as of 2030.²

The Irish government plans to achieve these targets by, for instance, retrofitting public buildings, embedding climate considerations in the budgeting process, and using sustainability criteria to evaluate procurement choices.³ Such measures could help Ireland meet its net-zero emissions goal while fostering decarbonization in the private sector. Retrofitting public buildings, for

example, could nurture the growth of products and services that could help make 500,000 homes more energy efficient by 2030. Mandating the use of green considerations in public-sector procurement decisions can motivate contractors to adapt their services and hasten the shift to sustainable offerings.⁴

¹ Climate Action and Low Carbon Development (Amendment) Act 2021.

² *Climate action plan 2021: Annex of actions*, Government of Ireland.

³ Ibid.

⁴ Ben Ikenson, “‘Cool’ roofs, cooler designs as the building industry embraces energy sustainability,” *Washington Post*, June 8, 2021.

The challenges of decarbonizing the public sector

Pressure and incentives to adopt sustainable organizational strategies are weaker in the public sector, partly because limited competition among public services leaves stakeholders little leverage to encourage more sustainable conduct. Public-sector entities are also more constrained in changing their services and can be less agile than their private-sector counterparts. Adopting digital health services may, for example, reduce overall emissions by reducing the amount of travel required for patients and healthcare workers; however, it could negatively affect people who lack access to reliable broadband or connected devices.

There will also be second-order implications for the sustainable choices that public-sector entities might make. It may, for example, make sense to move a government agency into a new net-zero office, but that will not reduce overall emissions if a private-sector entity takes over an energy-inefficient building.

The lack of integration among public-sector entities can stymie comprehensive decarbonization, as well. Local, regional, and national authorities; state-

owned enterprises; and other organizations (such as schools, hospitals, and transportation systems) often operate independently. A failure to share information might make it difficult to leverage the overall scale of the public sector and bring to bear its collective resources, skills, and knowledge.

In addition, public-sector organizations face difficulties monitoring their climate impact. The significant reorganizations that agencies and institutions undergo make comparing emissions meaningfully complicated at best. Many public-sector organizations, for example, struggle to define a base year and to articulate a rationale for their emissions calculations (see sidebar “The challenge of estimating the public sector’s impact”).

Sustainable strategies for the public sector

Despite the challenges, some public-sector agencies are beginning to decarbonize. An increasing number track and report their performance against a wide range of environmental measures, including GHG emissions. The United Kingdom’s Greening Government Commitments, for example, outline the actions that government

The challenge of estimating the public sector’s impact

Calculating emissions in the public sector is difficult, and it’s easy to underestimate their impact. The United Kingdom, for example, estimated its total territorial emissions at 454.8 million metric tons of carbon dioxide equivalent (MtCO₂e) in 2019. In this reckoning, the public sector directly accounted for less than 2 percent of that total. Its top emitters were health, education, public administration, and social-security services.¹

However, these figures account only for scope 1 and 2 emissions. If public transportation (often operated by private firms under contract) and other scope 3 emissions were included, these numbers would be substantially higher.

The United Kingdom and many other governments may therefore underestimate their carbon footprints and the size of the opportunity to improve

their environmental sustainability. Better visibility into the public sector’s environmental impact might more accurately reveal its true magnitude along the value chain and help decision makers prioritize decarbonization opportunities.

¹ “2019 UK Greenhouse Gas Emissions, Final Figures,” UK Department for Business, Energy, & Industrial Strategy, February 2, 2021.

Public-sector organizations that have developed a GHG inventory are better positioned to participate in policy making and the development of standards.

departments and their partners will take to reduce their impact on the environment through 2025. These commitments include mitigating climate change, working toward net zero by 2050, minimizing waste, promoting the efficient use of resources, reducing water use, procuring sustainable products and services, helping nature to recover by making space for plants and wildlife, and reducing the environmental impact of digital, information, and communications technologies.⁶

Progress in decarbonization can allow public-sector entities to answer the call (by citizens and civic organizations alike) for more disclosure of GHG information, identify cost-effective solutions, comply with new reporting mandates, and prepare for emerging regulations and policies. Moreover, public-sector organizations that have developed a GHG inventory are better positioned to participate in policy making and the development of standards.

Sustainable strategies for public-sector organizations could involve multiple initiatives, categorized into “scopes” by the Greenhouse Gas Protocol, a widely used international standard for corporate accounting and reporting of emissions.⁷ Scope 1 includes direct emissions from owned

or controlled sources. Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating, and cooling. Scope 3 includes all other indirect emissions (such as employee travel and the actions of suppliers) in an organization’s value chain.

The measures that could help public-sector entities to decarbonize their operations and become more sustainable include these:

1. ***Decarbonizing buildings and operations (scopes 1, 2, and 3).*** To decarbonize existing buildings, public-sector organizations could use a number of levers. These include improving insulation, maximizing the use of LED lighting, replacing oil and gas boilers with heat pumps, certifying buildings, and adopting technologies (such as lighting and temperature control sensors) to reduce energy consumption. Internal campaigns could make employees more aware of energy consumption and encourage new kinds of behavior. Public entities could also opt for carbon-neutral designs in new buildings and install green roofs, which could reduce energy consumption, improve water management, and foster biodiversity.

⁶ “Greening Government Commitments 2021 to 2025,” UK Department for Environment, Food & Rural Affairs, October 28, 2021.

⁷ “What are Scopes 1, 2 and 3 of Carbon Emissions?,” Plan A Academy, June 12, 2022.

For example, New Zealand's Carbon Neutral Government Programme, backed by the NZ \$200 million (US \$130 million) State Sector Decarbonisation Fund, is working to make the country's public-sector agencies carbon neutral by 2025. The program will finance the purchase of electric vehicles and the replacement of fossil fuel boilers with cleaner alternatives.⁸ In addition, it requires new public-sector buildings to meet energy efficiency standards and public-sector agencies to begin measuring and publicly reporting their emissions by 2025 and to offset those they cannot cut.⁹

2. ***Creating more sustainable travel policies and fleets (scopes 1 and 3).*** Organizations could introduce sustainable practices, such as using environmentally sustainable hotels, encouraging flight classes with lower CO₂ footprints, replacing flights with train travel, introducing stricter criteria for necessary business travel, offsetting essential travel with carbon credits, and choosing more sustainable airlines. Public entities with truck fleets could adopt solutions to decarbonize them, such as switching to liquid natural gas or compressed natural gas, piloting hydrogen or battery-electric vehicles, or switching to double-deck trailers. They could also improve internal awareness of efficient driving habits and perform regular maintenance to ensure that vehicles are in optimal driving condition.
3. ***Introducing new procurement criteria (scope 3).*** Integrating environmental, social, and governance (ESG) goals and principles into internal procurement processes is just a start. Public entities could embed ESG criteria in their procurement practices and decision making by, for example, adding ESG metrics to their requests for proposals and adding CO₂ pricing to their procurement-decision logic. They could also consider decarbonizing their

supply strategies by, for example, selecting local service providers and updating their supplier codes of conduct. Introducing new requirements and collaboration models with suppliers to promote sustainability throughout the value chain can ensure access to innovations that would meet demands, by customers and markets alike, for sustainable products and technologies.

Some countries have already set new norms for procurement. Singapore's public sector, for instance, has committed itself to taking the lead in driving green efforts, such as setting ambitious targets incorporating sustainability considerations in its infrastructure, operations, and procurement decisions.¹⁰

4. ***Promoting new workforce behavior (scope 3).*** The world's public sectors collectively employed about one-third of the global workforce in 2021.¹¹ Governments could influence emissions generated by their employees at work, and in transit to and from work, with incentives such as cycle-to-work campaigns and continued work-from-home arrangements. Public-sector entities could also encourage (for example, through incentives) or even directly subsidize their employees' switch to zero-emissions vehicles for commuting or business travel. Encouraging the adoption of sustainable "microbehaviors"—such as recycling and conserving power by turning off lights and programming thermostats—could also contribute significantly to an organization's cumulative sustainability. Public entities could engage their key internal influencers to help promote it their organizational culture.

Planning the journey to net zero

Public-sector organizations have so many opportunities to reduce their emissions (and those generated across their value chains) that the

⁸ "Public sector to be carbon neutral by 2025," Government of New Zealand, December 2, 2020.

⁹ Ibid.

¹⁰ "Public sector taking the lead in environmental sustainability," National Environment Agency, November 14, 2021.

¹¹ Zahid Hasnain et al., "What we've been reading about public sector employment and wages," World Bank Blogs, October 20, 2021.

prospect of a transformation may quickly become overwhelming. We have therefore identified five key steps to help guide decarbonization in the public sector.

1. **Define the aspiration.** The first step is to assess the organization's environmental goals in the light of national and industry strategies for achieving net-zero emissions and of the global target of limiting warming to 1.5 degrees Celsius above preindustrial levels. Because public-sector operations are often structured in hierarchies and individual organizations exercise varying levels of autonomy, defining the appropriate organizational roles and responsibilities is a key step to ensure that the right divisions or agencies are involved.

Once these roles have been defined, a government entity could assess its sustainability footprint, detailing its emissions by scope, identifying the largest emissions sources, and determining their impact on the value chain. It could then prioritize actions for the short, medium, and long terms by identifying the opportunities, risks, and costs of critical emission reduction levers.

2. **Build a performance infrastructure.** Strong governance may prove essential for ensuring accountability while increasing sustainability. Management oversight and the creation of incentives could encourage the successful delivery of a decarbonization strategy. An organization could establish a clear accountability structure, including the impact of the strategy on decision making, roles and responsibilities, the information flow, spans of control, communications channels, and relationship management. A sustainability team could be created, with a team leader in charge of setting goals, proposing and piloting strategies to address environmental concerns, communicating with the organization, and embedding sustainability in its culture.

Policies, processes, and key performance indicators (KPIs) could be critical for making information transparent and communicating expectations to the workforce. A net-zero measurement framework could provide information for decision making at the strategic, tactical, and operational levels. Since full decarbonization depends on reducing emissions along the value chain, organizations can collaborate with sustainable suppliers and use funding and financial incentives to encourage them to reduce emissions. Once governance for external and suppliers is in place, automation, advanced analytics, and connected solutions could create new opportunities to cut emissions.

3. **Engage the workforce.** Communicating environmental ambitions coherently, and regularly reporting on progress, could help embed change throughout an organization and keep the workforce energized and engaged in the transformation. To help employees better understand and commit themselves to decarbonization, internal messaging and social-media campaigns could include stories offering personal perspectives about why changes are needed. To develop the necessary skills, capability-building programs on sustainability could be included in existing training plans at every level of the organization.
4. **Build alliances.** Government entities could accelerate and magnify their impact by working with other public-sector organizations on similar sustainability journeys. By collaborating and building climate-focused partnerships and sector alliances, organizations could develop new service and delivery solutions and spark innovation. For example, Practice Greenhealth, a membership and networking organization for sustainable healthcare, delivers environmental solutions to hospitals and health systems across the United States. Its virtual cohorts of sustainability and healthcare professionals learn from their peers, exchange information,

and develop new strategies to meet common sustainability challenges.¹²

5. **Report and recognize progress.** Transparent, balanced reporting on the progress of decarbonization in meeting KPIs such as reducing emissions could promote accountability, encourage progress, and keep stakeholders informed. Clear, comprehensive disclosures that celebrate innovation and highlight necessary actions, areas for improvement, and barriers to progress may prove essential for long-term momentum and success. External, independent reviews could enhance the credibility of reporting. To increase external recognition, organizations could calculate and disclose their overall societal impact on sustainability, going beyond

environmental considerations by explaining how their decarbonization efforts benefit local communities, diversity, and inclusion.

As climate change continues to create a broad array of socioeconomic effects, leaders around the world may be increasingly compelled to incorporate the management of climate risk into their strategic planning and decision making.¹³ Achieving the aims of the Paris Agreement may require unprecedented commitment, collaboration, and transformation for companies, economies, and societies alike. Public-sector organizations have a unique opportunity to show leadership in this collective undertaking by setting and meeting the requirements for a more sustainable future.

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¹²"What is a virtual cohort?," Practice Greenhealth.

¹³"Confronting climate risk," *McKinsey Quarterly*, May 15, 2020.