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Notes and debates

Low carbon procurement: An emerging agenda

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ABSTRACT

The importance of climate change is shaping public policy internationally at several levels with much of the effort aimed at reducing the amount of carbon emissions released to the atmosphere through anthropogenic activity. Public procurement is a key financial mechanism available to governments to drive policy change and because of its scale can be also one of the most effective. During the past decade Low Carbon Procurement (LCP) has emerged as focal policy agenda in the UK and other countries. However, the implementation of LCP requires improved definition by governments and a greater understanding of Carbon Management tools and concepts such as Lifecycle Analysis on the part of procurement chiefs. Focusing on public procurement in the UK within the context of international policy development, this paper develops a working definition and model for LCP to guide future discussions on policy and practice. The paper presents an agenda of expected challenges for the implementation of LCP, including problems associated with weighing trade-offs between carbon and wider environmental or sustainability objectives, use of carbon tools and methodologies. The paper concludes by identifying key directions for further LCP research.

1. Introduction

The 'EUROPE 2020' strategy for sustainable growth highlights procurement as one of the key instruments to support Europe's shift towards a low carbon economy (EC, 2010a). EU and Member States are encouraged to use the power of procurement not only to achieve GHG[1] (Greenhouse Gases) reductions, but also to support innovation and industry's adjustment to low carbon production processes and products. Because of its scale, public procurement is widely seen as one of the most effective potential mechanisms available to governments to drive public policies such as the low carbon agenda. Each year European public authorities spend the equivalent of 16% of the EU's GDP on the purchase of goods and services (CEC, 2008). The UK government alone spends around £220 billion in procurement and has already directed considerable resource towards introducing the concept of sustainability across its public organizations (e.g. health, defense) providing scope as a powerful policy tool alongside regulation and other economic instruments. Borg et al. (2006) estimated that through the integration of energy efficiency considerations in procurement, public administrations across EU Member States could save up to 20% of their energy use by 2020, with corresponding carbon reductions. It is considered that as much as 18% of the EU's Kyoto Protocol commitments could have been achieved if all European public authorities would purchase their energy from renewable sources (Erdmenger, 2003), and this is without considering other potential reductions achieved from energy efficiencies.

The power of procurement to address global environmental goals has been equally picked up by the private sector which started to see a wave of initiatives in corporate responsibility with direct impacts of procurement on the supply chain (Walker et al., 2008; Andersen and Skjoett-Larsen, 2009; Spence and Bourlakis, 2009). In retailing, for example, Walmart has announced its intention to eliminate 20 million metric tons of GHG emissions from its global supply chain by the end of 2015 (Walmart, 2010). Other major retailers are also piloting low carbon approaches in their value chains, from carbon foot-printing initiatives to changes in logistics, support to suppliers' development and research (see Sainsbury's, 2009; Marks and Spencer, 2010; Tesco, 2010). Multi-national corporations such as IBM (Paterson, 2010) and Procter and Gamble (P&G, 2011) introduced their own supplier assessment tools and standards, featuring requirements for energy conservation, GHG emissions monitoring and reductions. The Carbon Disclosure Project

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[1] The greenhouse gases (GHG) considered to contribute the most to climate change and included in the Kyoto Protocol are: Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). However, carbon for its ubiquity and relative proportion in the atmosphere is usually used as shorthand for the remaining GHG, and general emissions' values are usually presented as tonnes of CO_2e (carbon dioxide equivalents). In this work, carbon and GHG will be used interchangeably.

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has been gradually growing in importance both with the private and public sectors (AEA, 2009; Pricewaterhouse Coopers, 2009), with the organization having a dedicated supply chain carbon reporting program that has been steadily growing in participation since 2008 (Accenture, 2012).

Reflecting these trends, research on carbon considerations in procurement and supply chain management has taken its first steps with studies focusing on comparisons of the carbon intensity of different supply chain alternatives (e.g. Browne et al., 2005; Cholette and Venkat, 2009; Edwards et al., 2010; Williams, 2007; Saunders and Barber, 2008). There is relatively little research, however, focusing on the strategic considerations of addressing overall supply chain carbon emissions within procurement processes, particularly in the public sector. This research note seeks to begin this conversation within the research community. We argue that such a growth in importance will require a new understanding of carbon management and reporting concepts on the part of public procurers and we develop a definition of LCP to guide future discussions on policy and practice. To conclude, we present an agenda of expected challenges for strategy and practice, including problems with weighing trade-offs between carbon and wider environmental or sustainability objectives and policies, with existing carbon tools and methodologies, and with potential resistance to change from within public procurement. By exploring the challenges facing public procurement as it struggles to encourage the adoption of low carbon practices, we suggest research directions that might support and critically analyze developments in the low carbon procurement agenda.

2. From sustainable to low carbon procurement

A significant body of research has developed around sustainable or 'green' supply chain management (e.g. Srivastava, 2007; Seuring and Müller, 2008; Carter and Rogers, 2008) and sustainable procurement; the topic has been approached under a variety of different denominations (e.g. see review by Walker and Phillips, 2009). Only a few studies have compared environmental supply chain management in public and private sectors (Walker et al., 2008; New et al., 2002) and there is comparatively little published work specifically on sustainable or 'green' public procurement (SPP and GPP), despite the public policy activity associated with it. Previous research has explored the use of public procurement to drive environmental protection (Bolton, 2008) and social outcomes (McCrudden, 2004); how local government approaches SPP and GPP as a sustainability driver (Preuss, 2007, 2009; Thomson and Jackson, 2007); procuring from SMEs to foster local economic development and community benefits (Walker and Preuss, 2008); barriers and facilitators for SPP and variations across public sector agencies (Walker and Brammer, 2009); interactions between GPP and other environmental product policy instruments (Li and Geiser, 2005); and the effects of mandatory GPP criteria on international trade policies (Wittmeyer, 2003).

Research focusing on the role of public procurement in driving climate change policies is even more limited, though Borg et al. (2006) highlighted the potential savings achievable from procuring energy efficiency solutions, while van Asselt et al. (2006) discuss the procedural opportunities and barriers for 'climate-friendly government procurement' under international regulations. However, Low Carbon Procurement or 'LCP' has been steadily growing in significance in international policy outputs and directives for over more than a decade.

Since the Rio92 summit and 'Agenda 21' (where for the first time a high profile international policy document included a direct reference to the role and impact public procurement could have on environment—see UNDESA, 1992), a plethora of international policy initiatives and campaigns on Sustainable Public Procurement (SPP) have developed. Among these we can highlight the creation of the Marrakech Task Force on Sustainable Public Procurement by the UN (UNDESA, 2008), the 'Procura+' campaign promoted by 'ICLEI—Local Governments for Sustainability' (ICLEI, 2007), the International Green Purchasing Network (IGPN, 2008), the European Commission's GPP program (EC, 2010b), and work by the OECD (OECD, 2007, 2008). A review by Perera et al. (2007) found at least 35 national SPP programmes, with all of them featuring climate change and energy efficiency high on the agenda.

At the European Union level, the EU Sustainable Development Strategy (CEC, 2001) and Sixth Environment Action Program (European Parliament, 2002) simultaneously introduced Europe-wide carbon reduction targets, and called member states to adopt Green Public Procurement (GPP) that would consider environmental criteria in the selection of products and services. Consequently, issues like energy efficiency, use of renewable energy sources (e.g. wind, wave power), setting of energy standards and labeling mechanisms acquired an increasing importance in public procurement, as this was clearly expected to play a role in the climate change mitigation agenda.

In the UK, the growth of the carbon reduction policy agenda would mirror that of the EU, and in 2008 the UK government announced its Climate Change Act as "*the world's first long-term legally binding framework to tackle the dangers of climate change*" (DECC, 2008). The Act set the regulatory basis for the publication of a range of policies, strategies and GHG reduction targets covering practically all sectors in society (HM Government, 2009b, 2010, 2011), including public procurement. In 2009 the expression 'low carbon procurement' officially appeared for the first time in UK policy strategy documents (HM Government, 2009a; NHS, 2009). One of the first organizations to create an LCP targeted plan was the National Health Service (NHS) with its 'Procuring for Carbon Reduction (P4CR)' program (NHS-SDU, 2010). This would be followed by a Sustainable Procurement Strategy by the Ministry of Defense (MoD, 2010) with a strong focus on carbon emissions' reductions.

Despite the growing importance of LCP on policy and strategy statements however, there was never any clear definition by the UK government. The general narrative is usually limited to broad spectrum intentions to contribute to emission reductions and the promotion of the low carbon economy, but these are rarely followed by guidance on how this should be achieved, what quantity and type of emissions are to be considered, how these are supposed to be accounted for. Despite a growing political pressure for its implementation, not only is there a problem of lack of clarity over what LCP means, but also lack of strategy and guidance for practice. There are in fact inherent challenges around carbon concepts and management that can make its translation to a policy or strategy arena difficult. However, we argue that without an understanding by decision-makers and procurers of the nature of carbon management, its primary challenges, and what these mean for work and the organization, the chances of this emerging policy being successfully translated from strategic vision to practice will be seriously compromised.

In the next sections we contribute to this clarification by discussing some of the key concepts and principles around carbon management and reporting, presenting a working definition of LCP based on such principles, and examining the core challenges associated with implementation.

3. Towards a working definition of LCP

The successful implementation of LCP will require from procurers (and indeed policy-makers) a minimum level of 'carbon literacy' skills and a previous understanding of key Carbon Management (CM)