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"GREEN PRODUCT" PROCUREMENT POLICY IN THE EUROPEAN UNION: TREATMENT OF LIFECYCLE CARBON ANALSYSIS AND ENVIRONMENTAL PPM RESTRICTIONS

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INTRODUCTION

The European Union has adopted policies to "green" its public purchasing to promote environmental sustainability. With over nineteen percent of GDP in the EU spent on government procurement, the European Commission (EC) recognizes the potential impact of sustainable public procurement on the environment and the economy.[1] This paper discusses EC central policy directives policy on government procurement of eco-friendly products through its "Green Product Program" (GPP), which seeks to foster a market for sustainable products through government buying power. Despite these efforts, green procurement in the EU has had limited success,[2] perhaps given that the EC's procurement directives are primarily voluntary and due to differing priorities among EU countries, which can lead to wide variations in uptake of sustainable procurement policies. Further, even for countries that favor green procurement, the existing procurement directives leave unanswered the question of to what extent agencies may make purchasing decisions based on full lifecycle analysis or other environment-friendly preferences for low-carbon production methods.

Changes are underway, however, that will likely give EU Member States greater latitude to take these environmental factors into account. First, the EU's emerging voluntary 'lifecycle product footprint' methodology, although not yet required in procurement, may help agencies assess the GHG impact of the products they procure, at least where vendors voluntarily disclose product 'carbon footprints.' Second, the European Commission's efforts too overhaul its general procurement directives will give EU countries more leeway to account for upstream environmental impacts and "process

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[1] Ireland Department of Public Expenditure and Reform**,** *Presidency Pursues Agreement on EU Public Procurement Package* (May 2, 2013), found at: http://per.gov.ie/2013/05/02/presidency-pursues-agreement-on-eu-public-procurement-package/.

[2] *See* COM (2003) 302 final, *Integrated Product Policy: Building on Environmental Life-Cycle Thinking* (June 18, 2003), p.12. *See also* MARKT/2010/02/C (2011), *Strategic Use of Public Procurement in Europe*, at IV and Ch. 2 (reporting 2010-11 GPP survey results) (reviewing green public procurement in the EU), found at: http://ec.europa.eu/internal_market/publicprocurement/docs/modernising_rules/strategic-use-public-procurement-europe_en.pdf.

and production methods" (PPMs). These steps will enable the EU to influence the market for green products by encouraging a shift towards upstream, supply chain carbon accounting.

I. General Background on Legal Authority for EU Green Procurement Policy

Environmental concerns are fundamental in EU law and therefore have been integrated into EU procurement policies. As the EC Treaty states,[3] "[e]nvironmental protection requirements must be integrated into the definition and implementation of the Community policies and activities…in particular with a view to promoting sustainable development."[4] Given this, early cases confirmed that EU countries may incorporate procurement policies that comport with such core tenets of European Community,[5] and commentators stress that Member States *must* take them into account.[6] Further supporting this view has been the EU's commitments under the Kyoto Protocol, which has particularly impacted EC energy procurement policy.[7]

To further sustainability the EC has issued various procurement directives, including several mandatory directives to promote renewable energy[8] and to require energy efficiency in certain product sectors. Most procurement, however, is covered by the EC's general procurement policies in its 2004 Procurement Directives[9] and accompanying voluntary purchasing guidelines.[10] These policies expressly allow public entities to take environmental considerations into account[11,12] to "contribute to the

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[3] *See* Simon Baughen, *International Trade and the Protection of the Environment* 143 (2007) (discussing the high value the EU places on protection of the environment).

[4] Treaty of Amsterdam Amending the Treaty on European Union, the Treaties Establishing the European Communities and Related Acts (1997), Article 6, as amended by the Treaty of Nice (2003) ("EC Treaty"). *See also* European Commission, *Environmental Integration*, found at: http://ec.europa.eu/environment/integration/integration.htm.

[5] R. Caranta and M.Trybus, *The Law of Green and Social Procurements in Europe* 21 (2010) (discussing Case C-225/98, *Commission v. French Republic* (2000), involving inclusion of criteria for promoting the employment of the long-term unemployed).

[6] Thomas Cottier explains, for example, that the Treaty has been read to "impose[] a 'legal obligation' upon EU countries to incorporate environmental considerations into their public procurement." Thomas Cottier et al., *International Trade Regulation and the Mitigation of Climate Change: World Trade Forum* 338 (2009).

[7] *Id.* at p. 337 (noting that, under these commitments, "climate change mitigation policy became…an integral party of [EU] energy policy").

[8] Directive 2001/77/EC (regarding renewable energy in electricity generation).

[9] Directive 2004/17/EC, *Coordinating the Procurement Procedures of Entities Operating in the Water, Energy, Transport and Postal Services Sectors* (March 31, 2004); Directive 2004/18/EC, *On the Coordination of Procedures for the Award of Public Works Contracts, Public Supply Contracts and Public Service Contracts* (March 31, 2004) ("2004 Procurement Directives").

[10] *Green Public Procurement in Europe (2006)*, found at: http://ec.europa.eu/environment/gpp/pdf/take_5.pdf. *See also* Cottier, *supra* n. 6, at p. 337.

[11] The 2004 Directives state that "environmental protection requirements are to be integrated into the definition and implementation of the Community policies and activities referred to in… th[e] Treaty [establishing the European Community]." Directive 2004/18/EC, *supra* n. 9, at Sec 5. *See also* Directive 2004/17/EC, *supra* n. 9, at Sec. 12 (clarifying how the contracting entities may "contribute to the protection of the environment and the promotion of sustainable development whilst ensuring the possibility of obtaining the best value for money for their contracts"), found at: http://eur-

protection of the environment and the promotion of sustainable development, whilst ensuring the possibility of obtaining the best value for money for their contracts."[13] Here the term 'the best value for money' has been interpreted to support environmental considerations to mean that EU Member States do not necessarily need to award contracts on the basis of the *lowest monetary price* of the contract, but may instead award contracts to the "most economically advantageous tender," which allows for inclusion of broader, non-price criteria such as environmental characteristics.[14] This reflects the view taken in the earlier EU procurement cases that found the term "economically advantageous" may encompass *non-economic* factors such as environmental sustainability.[15]

A. Non-discrimination Rules

Despite these efforts to leverage public procurement to further broader environmental goals, green procurement in the EU must contend with a number of potential restrictions. A comprehensive analysis of the rules and case law governing trade among EU Member States is beyond the scope of this paper, but it is important to first understand the threshold requirement that procurement must "compl[y] with…the principle of nondiscrimination" among Member States.[16] This integrates the WTO principle of "most favored nation" status[17] and bars Members from placing "quantitative restrictions on imports *or 'measures having equivalent effect.*'"[18] Although measures having a restrictive effect on trade among Members may nevertheless be justified, in relevant part, "on grounds of public morality, public policy or public security, the protection of health and life of humans, animals or plants,"[19] they "shall not…constitute a

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lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2004L0017:20100101:EN:PDF. *See also* EU Green Product Procurement, *EU Public Procurement Directives ("*EU GPP Directives*")*, found at: http://ec.europa.eu/environment/gpp/eu_public_directives_en.htm.

[12] However, only public contracts with monetary values over specified threshold amounts must comply with the Directives. *See* Commission Regulation (EU) No. 1251/2011 (November 30, 2011) ("amending Directives 2004/17/EC, 2004/18/EC and 2009/81/EC of the European Parliament and of the Council in respect of their application thresholds for the procedures for the awards of contract"), found at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011R1251:EN:NOT.

[13] EU GPP Directives*, supra* n. 11 (quoting preamble to EU Directive 2004/18/EC).

[14] EU 2004/18/EC, *supra* n. 9, at Sec. 3, Art. 53.

[15] As Cottier explains, "the term 'most economically advantageous'…in the award of public contract[s]…[may] include non-economic (or 'secondary') objectives of public procurement,…[such as] environmental or social considerations." Cottier et al., *supra* n. 6*,* at p. 339 and n. 50 (referring to EU cases *Concordia Bus Finland* and *Wienstrom). See also* Case C-513/99, *Concordia Bus Finland Oy Ab, formerly Stagecoach Finland Oy Ab v Helsingin kaupunki and HKL-Bussiliikenne* (2002) ("*Concordia Bus Finland*"); Case C-448/01, *EVN AG and Wienstrom GmbH v. Republic of Austria (2003) ("Wienstrom").* Caranta similarly notes that "strictly economic considerations are not the only ones relevant in public procurement," which expressly "may take criteria relating to the preservation of the environment into consideration." Caranta et al., *supra* n. 5 at p. 23 (citing *Concordia Bus Finland*).

[16] *Wienstrom*, *id.* at ¶¶ 34, 51 (holding renewable energy requirement in procurement criteria violated equal treatment principle where the renewable criteria could not be verified); Caranta et al., *supra* n. 5, at pp. 5, 26 (citing *Wienstrom*).

[17] Baughen, *supra* n. 3, at p. 130.

[18] Directive 2004/18/EC, *supra* n. 9, at Art. 28.

[19] *Id.* at Art. 30. The EU's 2004 Procurement Directives incorporate the EU's commitments under the WTO Government Procurement Agreement, although this does not "prevent the imposition or enforcement

means of arbitrary discrimination or a disguised restriction on trade between Member states."[20] Paralleling WTO principles, environmental procurement policies must also be necessary, proportionate to the objective or purpose, and least restrictive.[21,22]

B. Process and Production Methods

More important to the instant issue of GHG emissions, these principles of non-discrimination raise questions as how to treat 'non-product-related' PPMs: whether products produced through different processes can be treated differently for trade purposes to justify receiving preference in procurement, even though the manufacturing process results in no *physical* difference in characteristics of the end product. This would arise where a procuring country prefers products that differ solely from others because they "contain" lower levels of embedded carbon due to less energy intensity during extraction, manufacturing, or transport.[23] These issues mirror the unresolved PPM debate in the WTO arena, which is treated extensively in the literature, though government procurement is typically exempt from WTO rules. Under international law, however, the EC is nevertheless bound by the WTO's plurilateral Government Procurement Agreement (GPA),[24] which imposes requirements similar but not identical to those in GATT. The newly revised GPA appears to slightly loosen previous procurement limitations on PPMs restrictions.[25]

Beyond WTO rules, the PPM issue also is a limitation under EU law. There are three areas in the procurement process in which this issue of PPM restrictions can come into play: (1) technical specifications (e.g., specifying that the product must meet the EU Ecolabel requirements or other requirements), (2) award criteria (e.g., giving a 20% preference for bids in which the product is manufactured with renewable energy), and (3) performance of the contract (e.g., specifying that during execution of the contract (as in service contracts, or contracts for production of goods), recycled paper must be used, or certain other environmental criteria must be met. To address these scenarios, Caranta et

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of measures necessary to protect public policy, public morality, public security, health, human and animal life or the preservation of plant life, in particular with a view to sustainable development." *Id.* at Secs. 6-7.

[20] *Id*. *See also* Baughen, *supra* n. 3, at p. 129.

[21] Baughen, *supra* n. 3, at p. 158.

[22] There are also separate rules, not specific to environmental procurement, concerning "harmonized" requirements. These require that when the EU adopts measures that must be harmonized, EU countries may generally not introduce stricter internal regulations unless justified. *Id.* at pp. 138-51. In general, EU countries are justified in maintaining separate rules only when necessary or where there is "major need" for a stricter internal requirement. *Id.* at p. 140. To adopt *new* standards that differ from the harmonized rules, they must show that the provision is required to address a particular problem in the state, or due to "new scientific evidence relating to the protection of the environment or the working environment after the adoption of the harmonized measure." *Id.* at p. 141 (quoting *Denmark v. Commission*, Case C-3/00 (2003), ECR 1-2643, at para. 5).

[23] For a discussion on EU issues in this area, *see generally* Caranta et al., *supra* n. 5, at pp. 30-31.

[24] Agreement on Government Procurement (1994) (GPA), found at: www.wto.org.

[25] The new agreement has been adopted but is pending ratification by members. The European Parliament assented to the new GPA on November 19, 2013. *See Commissioner Michel Barnier welcomes European Parliament consent to the conclusion of the revised World Trade Organisation's Government Procurement Agreement*, European Commission - MEMO/13/1016 (Nov. 19, 2013), found at: http://europa.eu/rapid/press-release_MEMO-13-1016_en.htm?locale=en

al. explain that the EC has historically has taken a "cautious" view of PPMs and thus has allowed them only in limited circumstances.[26] For example, the 2003 EU case in *Wienstrom* decision took a somewhat restrictive view of PPMs, holding (based on prior directives) that technical specifications for procurement "must be linked to the subject matter of the contract."[27] Under the facts of that case, however, the court nevertheless found that renewable energy was a *permissible* criterion in a contract for energy—given that renewable energy was central to the subject of the contract (renewable energy) and comported with an EC directive to increase the use of renewable energy.[28] Yet, the "subject matter of the contract" requirement[29] may pose difficulty where the agency seeks to require that the goods it purchases have been made with renewable energy.[30] For example, here the "subject matter" would be viewed as the product category—i.e., paper—rather than a subcategory of "paper produced with renewable energy." Cutting against this strict demarcation, *Wienstrom* also held that environmental considerations *may* be included in procurement decisions, but only as long as they are merely "additional, non-determining criteria."[31]

Subsequent to *Wienstrom*, the EC attempted to resolve this PPM issue by allowing procurement to take into account "a given production methodology"[32] to integrate environmental concerns,[33] under the rationale that these PPMs are merely a form of "invisible" *performance characteristics* of the product. [34] Commentators have questioned this nebulous distinction between technical specifications and performance conditions, and thus the current Procurement Directives leave unanswered questions about the permissible bounds of environmental restrictions in green procurement.[35]

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[26] *Id.* at pp. 30-31, nn. 63-64, referring to COM (2001) 274 final.

[27] The *Wienstrom* case also required that the contract requirement must "not confer an unrestricted freedom of choice on the authority, [must be] expressly mentioned in the contract document or the contract notice, and [must] compl[y] with all the fundamental principles of Community law, in particular the principle of non-discrimination." *Wienstrom*, *supra* n. 15. *See also* Cottier, *supra* n. 6, at pp. 339-40; Peter Trepte, *Public Procurement in the EU: A Practitioner's Guide* 291 (2007).

[28] *See* Sue Arrowsmith and Peter Kunzlik, *Social and Environmental Policies in EU Procurement Law* 369, 391 (concluding that *Concordia Bus Finland* and *Wienstrom* should not preclude awarding contracts to favor renewable energy sources). *See also* Cottier, *supra* n. 6, at Ch. 17 (discussing EU procurement of renewable energy).

[29] EU, *Buying Social: A Guide to Taking Account of Social Considerations in Public Procurement* 29, 45 (2010) (reiterating that "technical specifications must be linked to the subject matter of the contract").

[30] *See generally* Caranta et al., *supra* n. 5, at p. 45.

[31] *Buying Social*, *supra* n. 29, at p. 40. However, Arrowsmith and Kunzlik have noted that *Concordia Bus Finland* and *Wienstrom* require a loose nexus to the 'subject matter of the contract' rather requiring the specifications be "directly linked." Arrowsmith et al., *supra* n. 28, at p. 403.

[32] Caranta et al., *supra* n. 5, at p. 31 (citing Directive 2004/18/EC).

[33] Dir. 2004/17/EC, *supra* n. 9, at Art. 38.

[34] *See* Arrowsmith et al., *supra* n. 28, at p. 394 (explaining the "invisibility fallacy" of the stance on PPMs); Caranta et al., *supra* n. 5, at pp. 47-48.

[35] Arrowsmith and Kunzlik present what they describe as a "most controversial conclusion…that the procurement regime should…recognize the right to procure works, supplies and services that are themselves produced/provided using electricity from renewable sources," but they find this question is "unresolved." Arrowsmith et al., *id.* at pp. 402, 404. *See also* Caranta, *id.* at p. 27 (noting that "[t]he new legislation [in the 2004 Procurement Directives] has, however, failed to clarify all the issues arising from the possible reference to sustainability considerations in public procurement").

II. GREEN PRODUCT PROCUREMENT UNDER CURRENT EC POLICY

The European Commission has taken several steps to encourage EU Member States to integrate environmental concerns into their public purchasing decisions, with several mandates in specific product sectors, as well as voluntary measures set forth in the 2004 Procurement Directives. Under these directives, procuring agencies do not yet need to account for upstream environmental factors or GHGs from the supply chain that are otherwise embedded in the product, as discussed in Part C below.

A. Mandatory Green Procurement In Specific Sectors

The EC has a handful of mandatory directives to promote energy efficiency through procurement in certain sectors, including office equipment, vehicle fleets and buildings. First, to promote demand-side efficiency measures, in 2006 the EU issued a directive that reiterates an earlier national target for a 9% reduction in national energy intensity[36] and requires Member States to take appropriate measures "at all levels of government" to achieve these targets.[37] Though the directive is not limited solely to public procurement, it specifically instructs Member States to "facilitate the exchange of best practices...on energy efficient public procurements,"[38] create energy efficiency guidelines, and consider efficiency "as a possible award criteria" in public contracts.[39]

Second, to further these efficiency goals the Commission entered into an agreement with the United States to coordinate energy efficiency labeling and extend U.S. Energy Star labeling to products sold within the EU.[40] The Commission has also mandated Member States to purchase office IT products that satisfy Energy Star-equivalent requirements or meet the country's own voluntary labeling standards for products in this IT sector.[41] Compliance among Member States in the office IT sector is one of the highest among product categories of green public procurement in the EU, perhaps due to the mandatory nature of this policy and/or the clear benchmarks set by the labeling criteria.[42]

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[36] Dir. 2006/32/EC (April 5, 2006), Secs. 10, 13 and Art. 4. This built on an earlier energy directive that "allows Member State authorities…to tender for new capacity or to opt for energy efficiency and demand-side measures." *Id.* at Sec. 5. The 2006 Directive emphasized the role of public procurement, stressing that "the public sector should be encouraged to integrate energy efficiency improvement considerations…[by] endeavor[ing] to use energy efficiency criteria in tendering procedures for public procurement," as authorized by the 2004 Procurement Directives (2004/17/EC and 2004/18/EC). *Id.* at Sec. 7.

[37] *Id*. at Art. 5. *See also* Arrowsmith et al., *supra* n. 28, at 372-73, 381-83.

[38] *Id*.

[39] *Id.*

[40] EC, *Agreement Between the Government of the United States of America and the European Community on the Coordination of Energy-Efficient Labeling Programs for Office Equipment* (December 28, 2006).

[41] Reg. (EC) No 106/2008, *Community Energy-Efficiency Labeling Programme for Office Equipment (*January 15, 2008). The regulation applies only to office IT products (Sec. 15), establishes voluntary labeling programs (Art. 4(3)), and requires energy efficient IT purchases by EU Central Governments in amounts above those covered in the 2004 procurement directives (Art. 5). In particular, Article 6 requires that EU "Central government authorities…shall specify energy-efficient requirements not less demanding than the [ENERGY STAR® equivalent]" for procurement.

[42] A 2012 study of GPP "uptake" among EU countries found that compliance with EU core environmental standards was the second highest for the office IT product sector. *See* Centre for European Policy Studies

Third, in the vehicle sector the EC has directed Member States to take GHGs and other air pollutant emissions into account when procuring vehicle fleets,[43] and it allows procuring agencies to consider additional environmental impacts.[44] The mandate "requires contracting authorities…to take into account *lifetime energy and environmental impacts*, including energy consumption and emissions of CO_2…when purchasing road transport vehicles,"[45] though elsewhere the directive states that this pertains only to *operational* impacts covering acquisition and ownership by the public entity, not to upstream emissions.[46]

Last, in 2010 the EC mandated energy efficiency standards in the building sector to facilitate its overarching goal of reducing greenhouse gas emissions and energy consumption in the EU by 20% as of 2020.[47] All new and renovated buildings must comply with efficiency requirements[48] such that, by the end of 2020, "all new buildings [must be] nearly zero energy buildings,"[49] defined as buildings that primarily use renewable energy.[50] Public entities must achieve this standard by 2018.[51]

These sector-specific mandates appear to have been effective, given that these sectors have enjoyed the highest rates of green procurement uptake. For example,

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(CEPS) et al., *The Uptake of Green Procurement in the EU 27* (2012) ("Uptake Study"), p. xiv (Figure G). *See also* EC, *Monitoring the Uptake of Green Procurement in the EU* (2012), found at: http://ec.europa.eu/environment/gpp/studies_en.htm; EC, *Buying Green! A Handbook on Green Public Procurement in Europe 2d Ed.* (2011), found at: http://ec.europa.eu/environment/gpp/pdf/handbook_summary.pdf; EC, *Buying Green: A Handbook on Environmental Public Procurement* (2004).

[43] Directive 2009/33/EC, *Promotion of Clean and Energy-Efficient Road Transport Vehicles* (April 23, 2009).

[44] *Id.* at Art. 5 (2).

[45] *Id.* at Art. 1 (emphasis added). Further, the EC adopted this policy expressly for "the objectives of promoting and stimulating the market for clean and energy-efficient vehicles and improving the contribution of the transport sector to the environment, climate and energy policies of the Community." *Id.*

[46] The 2009 vehicle directive specifies:

> "The operational energy and environmental impacts to be taken into account shall include at least the following:
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> (a) energy consumption;
> (b) emissions of CO_2; and
> (c) emissions of NOx, NMHC and particulate matter.
>
> In addition to the operational energy and environmental impacts mentioned in the first subparagraph, contracting authorities, contracting entities and operators may also consider other environmental impacts."

Id. at Art. 5 (2).

[47] Directive 2010/31/EU, *Energy Performance of Buildings* (May 19, 2010), at Secs. 3, 5. The EU-wide goal of 20% reduction in GHGs uses1990 levels as the baseline. To achieve this goal EU countries also have national targets for CO_2 reductions.

[48] *Id.* at Arts. 6-7.

[49] *Id.* at Art. 9 (1)(a).

[50] *Id.* at Art. 2 (2).

[51] Specifically, the directive defines these buildings as those in which "[t]he nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby." *Id.* at Art. 9(1)(b).

compliance with EU criteria for energy performance of office IT products tops 65% (second only to a 69% compliance rate for double-sided printing standards), and the CO_2 emission rules in the transport sector has a reported 60% compliance rate.[52] Although a 2012 survey suggests that Member States did *not* achieve high "core compliance" in the building sector,[53] the 2009-2010 reporting period predated the 2010 mandate for building efficiency and the minimum building efficiency requirements did not become mandatory until 2013.[54]

B. Voluntary Guidelines for Green Product Procurement

1. EU Policy on Green Product Procurement Under the 2004 Directives

In contrast to the mandates in the specific sectors described above, for most product sectors the EC has adopted a largely voluntary approach to green procurement. Beginning in earnest with its 2004 Procurement Directives, the Commission signaled that it would allow Member States to incorporate greater environmental factors into public contracts, and since then it has actively sought to promote green purchasing by establishing green product criteria for procurement. This policy does not, however, typically require particular environmental attributes that *must* be required in public contracts for products, but merely encourages Member States to include various environmental specifications in their procurement programs. The 2004 Procurement Directives allow EU countries to:

- include environmental requirements in technical specifications, such as eco-labeling;
- require social and environmental conditions to be met in the performance of the contract;
- require bidders to demonstrate they comply with their environmental obligations;
- require bidders to demonstrate they can perform the contract in accordance with environmental management measures; and
- set award criteria based on environmental characteristics.[55]

The Commission has pursued policies to promote and seek to harmonize green procurement practices among EU Member States. For example, in 2006 it set forth a broad Sustainable Development Strategy that, although aimed at sustainability overall and not limited to the issue of procurement, contained provisions on green product procurement. The strategy set a target for 2010 to "bring[] the average level of EU green

[52] *Uptake Study*, *supra* n. 42, at p. xiv (Figure G).
[53] *Id.* (reporting "uptake" of GPP "core criteria" for construction as 19% for water-saving installations, 31% for environment-friendly materials, and 40% for construction waste management).
[54] *Id.* at p. 6.
[55] *Id.* (citing Directive 2004/18/EC).

public procurement up to the standard achieved by the best performing Member States in 2006,"[56] which in 2008 it clarified should reach at least 50% for "core GPP criteria" by 2010.[57] To accomplish this goal the Commission recommended a unified set of green procurement criteria,[58] and it called for better procurement specifications in a broader range of product sectors.[59] Further, to build on the system in place at that time of "distinguishing between 'core' and 'comprehensive' criteria,"[60] it signaled a shift to identifying "advanced" comprehensive criteria that could receive significant weighting in procurement decisions.[61] This policy aims "to introduce gradually…reasonable objectives such as the performance levels proposed in the Action Plan, below which public procurement and national incentives would not be allowed."[62] In other words, it may incrementally move towards mandatory minimum criteria rather than retain its current voluntary approach.

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[56] Council of the European Union, 10917/06, *Renewed EU Sustainable Development Strategy* (June 26, 2006), Annex at p. 12 ("[a]iming to achieve by 2010 an EU average level of Green Public Procurement (GPP) equal to that currently achieved by the best performing EU countries").

[57] The Communication states, "by the year 2010, 50% of all tendering procedures should be green, where 'green' means compliant with endorsed common 'core' GPP criteria." COM (2008) 400 final, *Public Procurement for a Better Environment* (July 16, 2008), at p. 8. These conclusions and those of the Action Plan were in turn adopted in the December 2008 "SCP/SIP Plan." *See* Council of the European Union, 16914/08, *Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan - Council Conclusions*, p. 5 (Dec. 2008) ("SCP/SIP Plan"), found at: http://register.consilium.europa.eu/pdf/en/08/st16/st16914.en08.pdf. The SCP/SIP Plan stresses the role of public purchasing as "an effective tool to encourage improvement in the environmental, energy and social performance of products and services and to facilitate the promotion of sustainable works, goods and services within the market…taking the full life cycle of products into account." *Id.* Further, the SCP/SIP Plan is designed to "promot[e] the emergence of green pricing, better informing consumers and encouraging EU countries to develop national action plans in favour of green public procurement and tools to aid public procurement." *Id.*

[58] COM (2008) 400 final, *id*. at p. 5.

[59] These "priority sectors" are: construction, food/catering, transportation, energy, office machinery/computers, clothing/uniforms, paper and printing supplies, furniture, cleaning supplies, and health sector equipment. *Id.* at p. 7.

[60] *Id.* at pp. 5-6.

[61] *Id.* at p. 5. The report found that a 15 percent preferential weighting for superior environmental attributes could encourage innovation by "giv[ing] an important signal to the market place." *Id.* The report goes on to state that:

> "The introduction of a dynamic integrated approach combining minimum binding requirements and more advanced voluntary benchmarks on the eco-design of products and related labeling, together with voluntary tools for eco-labeling and environmental management, as well as enhanced energy labeling and provisions for greening public procurement**,** is a crucial stage in establishing the policy framework as well as synergies aiming to make consumption and production more sustainable in the EU…"

[62] 16914/08, SCP/SIP Plan, *supra* n. 57. The Plan states that this would be achieved "by means of a revision of the Energy Labeling Directive and in line with the [2004] Public Procurement Directives." *Id.*

2. Limited Success of the Green Product Procurement Program

Many EU countries have made strides in sustainable procurement, but on the whole there is room for improvement. Most EU countries have National Procurement Plans, as the Commission requires, through which they implement various sustainable policies. Examples include that Czechoslovakia requires 25% of its public vehicle fleet must be energy efficient by 2014, Sweden allows public agencies to use only 'green' vehicles, and Germany mandates that procurement of wood products must be sustainable.[63] Finland and the Netherlands have set ambitious targets for 100% green procurement,[64] while several EU countries have taken steps to promote green products through ecolabeling or other voluntary measures. For instance, the U.K. takes a proactive role by setting its own green standards for procurement in a number of product sectors; its Department for Environment, Food and Rural Affairs (DEFRA) has created voluntary "product roadmaps" in a number of product sectors, which partners with "supply chain actors" to "use a 'whole life cycle' approach to help improve the environmental performance of products."[65] In a similar vein, France's Grenelle II law introduces lifecycle reporting.[66]

Despite these steps, a 2012 study shows that green product procurement in the EU is lagging behind the Commission's target for a 50% compliance rate with its core green procurement criteria.[67] On the one hand, public procurement in over half of ten product categories had complied with "at least one core GPP criteria,"[68] an improvement from the previous reporting period in which only one out of ten categories examined had satisfied the 50% compliance target.[69] On the other hand, however, only 26% of procurement met all of the EU's "core," or minimum, green product procurement criteria. Further, these figures may in fact overestimate the amount of green procurement, since the study only had a limited number of responses (with a four percent response rate)[70] and these may

[63] European Environment Agency, *Resource efficiency in Europe: Policies and Approaches in 31 EEA Member and Cooperating Countries* (2011), pp. 34, 37, found at: http://www.eea.europa.eu/themes/economy/resource-efficiency/resource-efficiency.

[64] To this end, Finland requires, in part: "[a]ll [government] buildings that are new, under renovation or leased must be 'passive' by 2015," transport needs must be reduced by 10% by 2015, and organic/seasonal food must be procured, and 60% of procured electricity must be from renewable sources by 2015. *Id.* at pp. 37-38. This report also highlights green procurement efforts such as: Denmark's goal for 50% 'green' public procurement in ten product categories, France's target to increase the use of organic foods used in schools and hospitals and to have 100% eco-certified wood, and Italy's target for 2009 that 30-40% of publicly procured goods to be made with increased energy efficiency. *Id.* at p. 71. The report does not specify, however, whether these targets have been met.

[65] *Id.* at p. 26.

[66] For more information on France's Grenelle II program, *see* Ernst and Young, *How France's New Sustainability Reporting Law Impacts US Companies* (2012), found at: http://www.ey.com/Publication/vwLUAssets/Frances_sustainability_law_to_impact_US_companies/$FILE/How_Frances_new_sustainability_reporting_law.pdf.

[67] Uptake Study, *supra* n. 42.

[68] *Id.* at vii.

[69] *Id.* at x and Finding 5. However, in an alternate method of judging compliance—looking at the *monetary value* of the contracts rather than the number of contracts—the study found that 38% of public procurement for these product categories incorporated all of the requisite minimum "core" green criteria. *Id.*

[70] *Id.* at iv.

reflect self-selection reporting bias towards agencies that have green procurement programs. Moreover, each country's ranking varies widely depending on whether the study measures the total *number* of contracts, versus the *value* of procurement contracts. For instance, the study found that Finland is one of 12 countries that had a "GPP uptake rate" below 20% when assessed by looking at the *number* of procurement contracts or product categories for which the country used green procurement criteria. Yet, when measured according to the *value* of those procurement contracts, however, Finland ranked as the "top performer and the only country with an uptake above 50%."[71]

Apart from these issues in determining the exact uptake rate, at minimum the study reveals less-than-robust green procurement and wide variations in procurement policies among EU Member States.[72] The report attributes part of these differences to the degree to which each country already had an established a National Action Plan in place for green procurement, and it suggests that uptake may be on the rise now that more EU countries have their plans in place.[73] Another reason for this seemingly slow uptake may be the fact that most of the Commission's criteria are voluntary, in contrast to higher compliance for the mandatory criteria for certain sectors, as discussed above.[74]

C. Lifecycle Analysis Under Current EU GPP Policy

The EU's 2004 Procurement Directives generally favor a lifecycle approach, but they do not require cradle-to-grave assessment of environmental impacts and likewise do not require procuring agencies to use lifecycle analysis (LCA) of CO2 emissions to account for upstream energy used in manufacturing or elsewhere in the supply chain.[75] As described below, EU policy in this area is first complicated by divergent views on the definition of "lifecycle." Second, the EU's Ecolabel criteria take a somewhat truncated view of lifecycle analysis that, in turn, impacts procurement linked to the Ecolabel.

1. Conflicting Definitions of Lifecycle Analysis

The traditional, narrow treatment of lifecycle impacts in EC procurement policy likely reflects the fact that the policy often uses conflicting definitions of the term "lifecycle." Although EC policy typically defines lifecycle to encompass "[f]our main cost categories…[of] investment, operation, maintenance and end-of-life disposal expenses"—which leaves out production and other upstream impacts—it goes on to state that "environmental LCC [(life cycle cost)] methodology takes into account the above

[71] *Id.*
[72] *Id.* at viii.
[73] *Id.* at viii - ix.
[74] As the EU's 2004 Procurement Directives spell out, "GPP is a voluntary instrument, which means that individual EU countries and public authorities can determine the extent to which they implement it." *Buying Green! (2011), supra* n. 42, at p. 4 (citing 2004 Procurement Directives, 2004/17/EC and 2004/18/EC).
[75] *Id.* at p. 6. *See generally*, for discussion of LCA in procurement, Öko-Institut e.V., *Costs and Benefits of Green Public Procurement in Europe* (2007), p. 6, found at: http://ec.europa.eu/environment/gpp/pdf/eu_recommendations_1.pdf.

four main cost categories *plus external environmental costs*,"[76] which presumably can incorporate upstream externalities.

Supporting a full lifecycle view, the Commission states that "[a]s 'greener' goods are defined on a lifecycle basis, GPP will affect *the whole supply chain* and will also stimulate the use of green standards in private procurement."[77] Similarly, EC guidance on GPP lifecycle costing allows external environmental considerations to include "the external costs of *global warming contribution associated with emissions of different greenhouse gases*."[78] The GPP glossary definition further states that "[LCA] is commonly referred to as a 'cradle-to-grave' analysis…[including] e.g. *the energy and raw materials consumed, the emissions and wastes generated…"*[79] In non-procurement contexts, as well, the EC has adopted this inclusive approach.[80] For example, the European Platform on LCA recognizes ISO standards on lifecycle analysis that "tak[e] into account the full life-cycle of the product," including "emissions associated with a product from the extraction of raw materials through production and use to final disposal, including recycling, reuse, and energy recovery."[81] It also seeks to "estimate…environmental pressures in terms of [] *climate change* [and other impacts]…associated with the environmental interventions attributable to the life-cycle of a product."[82] This signals the need to account for upstream environmental impacts.[83]

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[76] GPP, *Life-cycle Costing*, found at: http://ec.europa.eu/environment/gpp/lcc.htm. (emphasis added).

[77] COM (2008) 400 final, *supra* n. 57, at 1.1 (emphasis added).

[78] GPP Lifecycle Costing, *supra* n. 76 (emphasis added).

[79] EU GPP, *Glossary (emphasis added)*, found at: http://ec.europa.eu/environment/gpp/lcc.htm.

[80] *See Integrated Product Policy*, found at: http://ec.europa.eu/environment/ipp/integratedpp.htm. These efforts do not focus on government procurement in particular

[81] European Platform on LCA, found at: http://ec.europa.eu/environment/ipp/lca.htm. The Platform further states:

> "Life Cycle Assessment (LCA) is an internationally standardized methodology (ISO 14040 ff). LCA helps to quantify the environmental pressures related to goods and services (products), the environmental benefits, the trade-offs and areas for achieving improvements taking into account the full life-cycle of the product. Life Cycle Inventory (LCI) and Life Cycle Impact assessment (LCIA) are consecutive parts of a Life Cycle Assessment, where:
>
> - Life Cycle Inventory is the collection and analysis of environmental interventions data (e.g. emissions to e.g. air and water, waste generation and resource consumption) which are associated with a product from the extraction of raw materials through production and use to final disposal, including recycling, reuse, and energy recovery.
> - Life Cycle Impact Assessment is the estimation of indicators of the environmental pressures in terms of e.g. climate change, summer smog, resource depletion, acidification, human health effects, etc. associated with the environmental interventions attributable to the life-cycle of a product.
>
> The data used in LCA should be consistent and quality assured and *reflects actual industrial process chains." Id.* (emphasis added).

[82] *Id.* (emphasis added). Other environmental impacts include "summer smog, resource depletion, acidification, human health effects, etc…" *Id.*

[83] IPP, for example, looks broadly at the ways in which products contribute to "environmental degradation…whether from their manufacturing, use or disposal," embracing a full lifecycle approach. Integrated Product Policy, *supra* n. 80. In particular, it "seeks to minimize these by looking at all phases of a products' life-cycle and taking action where it is most effective[,]…cover[ing] all the areas from the extraction of natural resources, through their design, manufacture, assembly, marketing, distribution, sale and use to their eventual disposal as waste." *Id.* *See* also *Final Report of the Integrated Product Policy*

Limiting this interpretation, EC procurement policy traditionally has emphasized *operational* costs rather than upstream impacts. Although EU policy states that "whole life"[84] costing can be included in procurement decisions, generally this has not been defined to include upstream emissions. Instead, it typically refers only to the procuring agency's *operational* life and disposal—the costs (or impacts) once the product is purchased by the *end consumer* (here, e.g., the public agency).[85] For example, often lifecycle costs are defined to "cover the purchase price and associated costs (delivery, installation, commissioning…), operating costs (including energy, spares, maintenance) and end-of-life costs, [such] as decommissioning, removal and disposal."[86] Likewise, although the GPP program states that "[l]ife-cycle costing or LCC is a tool which evaluates the costs of an asset *throughout its life-cycle,*" it again defines 'lifecycle' narrowly as merely the total cost of ownership—the "costs associated with the use, maintenance and end-of-life."[87] Moreover, even where upstream impacts *are* considered, the Commission has adopted the "life cycle thinking" approach, as opposed to a full lifecycle analysis,[88] to account only for environmental impacts "*at the point in the life-*

Working Group on Product Information (2006) ("IPP Report"), http://ec.europa.eu/environment/ipp/pdf/20070115_report.pdf; *Life-Cycle Assessment Tools and Services and Life-Cycle Inventory Data in support of European Integrated Product Policy, Final Report* (2006), found at: http://ec.europa.eu/environment/ipp/pdf/report_lca_tools.pdf.

[84] Smart SPP*, Driving Energy Efficient Innovation Through Procurement: A Practical Guide for Public Authorities* (2011), p. 7 at n.2, found at: http://www.smart-spp.eu/fileadmin/template/projects/smart_spp/files/Guidance/Final_versions/SMART_SPP_Guide_2011_EN_FINAL_www.pdf.

[85] EU 2011 guidance defines life-cycle costs narrowly, stating that:

> "Life-cycle costs, also called "whole life costs" (WLC), are the costs that a product will cause to the contracting authority throughout the period of time that it will be used by the authority. For many types of products and especially for energy-consuming goods, the acquisitions costs may represent only a small part of all the costs that it may cause during its life span. Hence, costs for maintenance, operation and disposal are included when taking a life-cycle costing (LCC) approach."

Id. at p. 7, n.2.

[86] *Id.* at 2.

[87] EU policy states:

> "Under EU procurement rules, only two award criteria can be used 'the lowest price' and 'the most economically advantageous tender'. Where the criteria of the 'economically most advantageous tender' is chosen, relevant environmental criteria can be inserted either as a benchmark to compare green offers with each other (in the case where the technical specifications define the contract as being green) or as a way of introducing an environmental element and giving it a certain weighting."

EU GPP, Glossary, found at: http://ec.europa.eu/environment/gpp/glossary_en.htm**.** It further states as to 'most economically advantageous tenders':

> "Under the…most economically advantageous tender (MEAT)….costs may be calculated on the basis of the whole life-cycle of the supplies, services or works, and not solely on the purchase price. *This allows costs associated with the use, maintenance and end-of-life of the supplies, services or works to be taken into account – sometimes also referred to as total cost of ownership*."

Id. (emphasis added).

[88] COM (2003) 302 final, *Integrated Product Policy - Building on Environmental Life-Cycle Thinking* (June 2003).

cycle where they are likely to be most effective."[89] This seeks only to identify the key environmental impacts of a given product category, simplifying the analysis in lieu of a comprehensive life-cycle assessment. [90] In these ways EC procurement policy often stands in contrast to a complete life cycle accounting, which would incorporate upstream and vendor supply chain emissions.

2. Treatment of Lifecycle Impacts in Procurement Technical Specifications

EC technical specification criteria for procurement also do not require factoring upstream impacts into procurement, even for product categories for which the Commission has identified upstream environmental concerns. While many of the EU's procurement product category specifications refer to EU Ecolabel certification,[91] the Ecolabel does not currently account for full lifecycle impacts. For example, the EU Ecolabel complies with ISO 14024 standards for "Type I" ecolabels that account for multiple environmental factors and award labels based on a 'best in class' approach,[92] which for the EU Ecolabel means a standard that only "the 10 to 20% most environmentally friendly products currently on the market can meet."[93] The Ecolabel certification process seeks only to assess the lifecycle *impacts* of product categories, identifying "the stages where the product has the highest environmental impact"[94] (i.e., reflecting the "life cycle thinking" approach discussed above).

Even where an important environmental impact has been identified at a particular lifecycle stage, this does not necessarily mean that the procurement specification addresses it; the degree to which the procurement specifications account for the given impact is constrained by whether there are relevant EU or international standards that for that aspect of the product lifecycle. For instance, EC procurement specifications for mobile phones identify key environmental impacts at the supply chain stage of sourcing raw materials, but the procurement specifications for these products primarily relate to other issues, such as recycled content and the impact of toxins in the product on *downstream* disposal.[95] In contrast, the procurement category of stone and ceramic

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[89] 16914/08, SCP/SIP Plan, *supra* n. 57 at p. 5 (emphasis added).

[90] *Id.* at p. 10 ("emphasizing the Eco-label criteria must be taken into consideration when establishing criteria for the development of green public procurement").

[91] For many product categories Ecolabel certification suffices to show compliance with the EC's green procurement criteria. To avoid the label becoming a barrier to trade, the purchasing entity may not *require* the label and, instead, must accept equivalent proof that the underlying criteria of the Ecolabel have been met.

[92] For a general description of ISO 14024 "Type I" labels, *see* UNOPS, *A Guide to Environmental Labels* (2009), p. 10, found at: https://www.ungm.org/SustainableProcurement/toolsUN/Env_Labels_Guide.pdf.

[93] EC, *Ecolabel for Business*, found at: http://ec.europa.eu/environment/ecolabel/eu-ecolabel-for-businesses.html.

[94] *More About the EU Ecolabel*, found at: http://ec.europa.eu/environment/ecolabel/the-ecolabel-scheme.html.

[95] The guidelines note upstream environmental concerns of "[e]nergy consumption, especially in manufacturing[,] [and]…extraction of raw materials" in producing cell phones, but the EU's "GPP Approach" does not specifically address these concerns, other than the tangential benefit from encouraging the use of recycled material. *See* EU GPP Criteria, found at: http://ec.europa.eu/environment/gpp/pdf/criteria/.

flooring contains numerous upstream process specifications, including the amount of recycled water used during the extraction of raw materials, energy expended in production, and air pollutants (other than GHGs) released during manufacturing,[96] standards which likely derived from non-procurement requirements (such as air and water quality control measures).

In short, the extent to which upstream impacts are addressed in the EU's green procurement specifications varies by product category and are not yet uniformly taken into account. This is less a function of policy, however, and more due to lack of sufficient criteria. If the EU Ecolabel certification process were to place a greater focus on upstream greenhouse gas emissions, then the EU's GPP program would *de facto* also do so for procurement categories that have technical specifications linked to the Ecolabel, even if LCA emissions were not otherwise an explicit criteria in EU procurement decisions.

III. EMERGING EU "PRODUCT ENVIRONMENTAL FOOTPRINT" METHODOLOGY

The use of LCA to calculate the carbon footprint of products will likely expand with the development of the EC's voluntary LCA methodology for a "product environmental footprint" (PEF), which could be eventually integrated into product procurement decisions.[97] The EC is in the process of finalizing this LCA methodology for goods and organizations; unveiled in May of 2013, [98] it will provide an alternative to the numerous, divergent lifecycle programs that have sprung up within EU Member States and abroad.[99] While it technically does not require an exact lifecycle footprint, it prioritizes "the 3 or 4 environmental impacts…most relevant…for a given product category or sector."[100] Currently the program is slated to be voluntary, although the Commission has expressly left open how it will use the methodology in its "second phase," which commences in 2016 at the close of the current pilot phase.[101] A purely voluntary approach would seem to undercut the EC's rationale of eliminating consumer confusion of having multiple LCA standards within the EU, but it would nevertheless

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[96] GPP Criteria for Hard Floor Coverings, found at: http://ec.europa.eu/environment/gpp/pdf/criteria/hard_floor.pdf.

[97] This would not happen at least until the close of the test phase in 2016. *See infra at* Part III.

[98] 2013/179/EU, *Commission Recommendation of 9 April 2013 on the Use of Common Methods to Measure and Communicate to Measure and Communicate the Life Cycle Environmental Performance of Products and Organizations* (May 2013), at p. 1.

[99] This effort began as an outgrowth of the EU's earlier work in its Integrated Product Policy (IPP) program, which in 2003 identified "the need for more consistent data and consensus [on] LCA methodologies." COM/2003/302 final, *Integrated Product Policy*. *See also* European Platform on Life Cycle Assessment, found at: ec.europa.eu/environment/ipp/lca.htm. For other methodology treating Scope 3 emissions, *see GHG Protocol Value Added Protocol,* found at: www.ghgprotocol.org.

[100] COM/2013/0196 final**,** *Building the Single Market for Green Products Facilitating Better Information on the Environmental Performance of Products and Organisations* (April 2013), at Sec. at 4.3. *See also* 2013/179/EU, *Commission Recommendation of 9 April 2013 on the Use of Common Methods to Measure and Communicate the Life Cycle Environmental Performance of Products and Organizations* (May 2013), at pp. 10, 101 (Annex X, Table 16) (comparing EU methodology with that of the PAS 2050, ISO, and GHG Protocol).

[101] *Id.* at Sec. 4.4.

reduce the burden on vendors from having to obtain multiple certifications, given that Member States would need to honor an EU-wide standard.

This PEF methodology is not yet targeted at government purchasing, but the Commission has stated that it might later incorporate these standards into procurement requirements.[102] Even without it doing so, this methodology should nevertheless help agencies compare product footprints, where provided by vendors, and thus will enable procuring entities to take greater account of supply chain GHG impacts. The proposed rules would also impact procurement indirectly if, for example, the Commission chooses to integrate this methodology into EU Ecolabel standards that form the foundation for many of the technical procurement specifications.

IV. PENDING EFFORTS TO REFORM EU PROCUREMENT LAW

Green procurement in the EU will also be impacted by the EC's current efforts to overhaul its 2004 Procurement Directives. These newly proposed procurement rules promote "common societal goals such as protection of the environment, higher resource and energy efficiency, [and] combating climate change"[103] by "provid[ing] the necessary 'market pull,'" through government buying power. [104] They go farther than the current directives to clarify and liberalize the rules on green product procurement, and will likely expand the authority of Member States to take use lifecycle analysis and/or 'non-product related' PPMs in government procurement decisions. The 2011 proposed directive also indicates a greater willingness to adopt sector-specific procurement mandates in the future, as appropriate and as relevant standards emerge.[105]

A. Lifecycle Costing Under the Proposed Procurement Directive

The proposed directive also promotes greater use of lifecycle costing, authorizing LCA as a basis not only for determining the "most economically advantageous tender,"

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[102] The Commission has stated that it may "gradually incorporate[]" this methodology into the EU green procurement rules. *Id.* at Sec. 4.3. It is unclear how this LCA process will impact lifecycle cost calculations under the pending green procurement legislation (*see infra* at Part IV), but presumably the better methodology created by the new standards will help procuring agencies incorporate LCA into procurement decisions.

[103] COM/2011/0896 final, Explanatory Memorandum at 1 (citing COM/2011/206, Single Market Act). These environmental provisions are consistent with the Europe 2020 strategy for sustainability. *See* COM/ 2010/639, Europe 2020; COM/2010/614, Industrial Policy for the Globalized Era. The proposal contains non-environmental provisions to simplify and streamline the EU's procurement rules

[104] The proposed changes are intended to:

> "… achiev[e] best value for public money as well as wider economic, environmental and social benefits in terms of generating new ideas, translating them into innovative products and services and thus promoting sustainable economic growth…[by] provid[ing] the necessary 'market pull,' incentivizing the development of innovative solution[s]."

Id. at Recital 17.

[105] *Id.* at Recital 39.

but also for evaluating the lowest price.[106] More recent proposed amendments would go further, by dropping all reference to "lowest cost" in the award criteria and, in its place, exclusively awarding contracts solely on the basis of the 'most economically advantageous tender.'[107] This 2013 version also would expand the term "economically advantageous" to expressly "include economic,…environmental and[/or] social sustainability,"[108] and would explicitly allow procuring agencies to use "stricter environmental controls and product methodology" in award criteria.[109] Further, it would impose a 'soft mandate' for environmental considerations by requiring that public contracts "*should* refer to…sustainable standards in the technical specifications or performance conditions."[110]

The proposed rules would allow for greater inclusion of upstream impacts. For example, when calculating 'the most economically advantageous offer,' the 2011 proposed procurement directive not only allows agencies to consider full lifecycle costs, but also defines this broadly to include "all costs over the life-cycle of works, supplies, or services, both their internal costs (*such as development, production*, use, maintenance and end of life disposal costs) *and their external costs*, provided they can be monetized and monitored."[111] Moreover, the 2011 proposal would make lifecycle-costing mandatory once "common methodology emerges,"[112] which presumably refers to the LCA methodology currently being developed by the Commission. The 2013 proposed amendments would omit this requirement,[113] however, so it remains to be seen whether an LCA mandate will be included in the final procurement directive.

B. Treatment of PPMs Under the Proposed Procurement Directive

Consistent with this expanded treatment of lifecycle costs, the proposed procurement directive also appears to authorize greater use of PPM restrictions in government purchasing decisions. As discussed above, the current 2004 Procurement Directives take a somewhat limited view of PPMs, stating only that technical specifications for "performance or functional requirements…may include environmental characteristics" such as environmental performance,[114] but limiting that "technical specifications *shall not* refer to a specific make or source, or a particular process" except

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[106] COM/2011/0896 final, *supra* n. 103, at Recital 40. The changes would also clarify that "lowest cost" may include "quality standards by using technical specifications or contract performance. *Id.* at Art. 37.

[107] A7-0007/2013, *Report on the Proposal for a Directive of the European Parliament and of the Council on Public Procurement*, Committee on the Internal Market and Consumer Protection (September 1, 2013), pp. 31-32, Amd. 34 to Recital 37. However, the EU's Commission on Trade proposes to retain the 2011's version proposal to use "price alone" as a measure of the 'most economically advantageous tender.' *Id.* at p. 168, Amd. 34 to Art. 66.

[108] *Id.* at p. 32, Amd. 35 to Recital 38.

[109] *Id.* at p. 33, Amd. 37, adding a part (b) to Recital 38.

[110] *Id.* at p. 31-32, Amd. 34 to Recital 37 (emphasis added).

[111] COM/2011/0896 final, *supra* n. 103, at Recital 40. The 2013 proposed amendments further extend this by specifically including "research" and "transport" to costs considered in lifecycle analysis. Report, A7-0007/2013, *supra* n. 107, at pp. 34-35, Amd. 39 to Recital 40.

[112] COM/2011/0896 final, *supra* n. 103, at Recital 40 (emphasis added).

[113] Report, A7-0007/2013, *supra* n. 107, at pp. 34-35, Amd. 39 to Recital 40.

[114] Directive 2004/18/EC, *supra* n. 10, at Art. 23(3)(b) and Annex VI(1).

when "justified by the subject matter of the contract."[115] In contrast, the 2011 proposed changes would allow contracting authorities to consider PPMs in both the technical specifications and award criteria.[116] Specifically, these changes provide that "contracting authorities *should be allowed to refer to a specific production process*, a specific mode of provision of services, *or a specific process for any other stage of the life cycle* of a product or service…"[117] Further, award criteria for determining the 'most economically advantageous tender' may include "*the specific process of production* or provision of the required works, supplies or services of or of any other stage of its life cycle."[118] Here lifecycle costs expressly cover "*all stages*…from raw material acquisition or generation of resources until disposal"[119] and shall include "internal costs…such as product costs" *and external environmental costs*, "which may include the cost of emissions of GHGs and of other pollutant emissions and other climate change mitigation costs."[120]

Despite this broad language, the extent to which PPMs can be used under the newly proposed legislation, if adopted, may be limited by the fact that the new rules retain the existing requirement that PPM criteria must be linked to the subject matter of the contract.[121] This restricts criteria to only those that "concern factors directly involved in these processes and characterize the specific process of production or provision of the requested works, supplies, or services."[122,123] It remains to be seen how strictly this will

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[115] Article 23(8) states in full as to technical specifications:

> "8. *Unless justified by the subject-matter of the contract, technical specifications shall not refer to a specific make or source, or a particular process, or to trade marks, patents, types or a specific origin or production* with the effect of favouring or eliminating certain undertakings or certain products. Such reference shall be permitted on an exceptional basis, where a sufficiently precise and intelligible description of the subject-matter of the contract pursuant to paragraphs 3 and 4 is not possible; such reference shall be accompanied by the words 'or equivalent.'"

Id. at Art. 23(8) (emphasis added). Annex VI to the 2004 Directive defines technical specifications for products ("public supply contracts") as:

> "[1](b) 'technical specification,' in the case of public supply or service contracts, means a specification in a document defining the required characteristics of a product or a service, such as quality levels, environmental performance levels, design for all requirements (including accessibility for disabled persons) and conformity assessment, performance, use of the product, safety or dimensions, *including requirements relevant to the product* as regards the name under which the product is sold, terminology, symbols, testing and test methods, packaging, marking and labeling, user instructions, *production processes and methods* and conformity assessment procedures…"

Id. (emphasis added)

[116] The 2013 proposed amendments would also allow PPMs in the performance conditions. Report, A7-0007/2013, *supra* n. 107 at pp. 35-36, Amd. 40 to Recital 41.

[117] COM/2011/0896 final, *supra* n. 103, at Recital 41 (emphasis added). This provision goes on to state, however, that these must be "linked to the subject-matter of the public contract."

[118] *Id.* at Art. 66 (emphasis added).

[119] *Id.* at Sec. 2, Detailed Explanation of the Proposal (emphasis added).

[120] *Id.* at Art. 67 (1) (emphasis added).

[121] *Id.* at Recital 41.

[122] *Id.* at Sec. 2.

[123] *Id.* at Recital 41 (technical specifications) and Art. 66(2) (award criteria). Recital 41 states in relevant part, "(41) Furthermore, in technical specifications and in award criteria, contracting authorities should be allowed to refer to a specific production process, a specific mode of provision of services, or a specific

be applied to contract preferences for 'green products,' but the proposals suggest such preferences would be permissible. First, presumably the proposed broad definition of lifecycle costs, if adopted, demonstrates a 'pro-PPM' policy that may lead EU courts to liberally construe the "subject matter" limit to not bar stricter PPM limits. Second, an explanatory statement to the 2011 draft directive clarifies that this "subject matter" provision simply operates to exclude requirements that are not "closely related"[124] to production of the product, "such as general corporate responsibility requirements covering the [firm's] whole operation."[125] This appears to condone PPMs linked to the production of the particular product at issue, such as criteria on whether the product was produced with renewable energy or sustainably sourced; it would merely limit a restriction that *all* the vendor's products must be produced sustainably, even those not being procured. Such a tenuous connection with the product would be considered too remote. Any PPM preferences would also be subject to rules under the WTO Government Procurement Agreement.[126]

V. OPTIMIZING POLICY TO PROMOTE SUPPLY CHAIN MANAGEMENT

Given the existing and newly proposed procurement policy in the EU, one can imagine a hybrid of approaches to best foster the market for sustainable products. First, loosening the 'subject matter' constraint, as the proposed directive seems to do, would give agencies greater ability to specify PPM criteria in order to take supply chain impacts into account. Second, adopting the provision in the 2013 proposed amendments to award contracts only on the basis of the "most economically advantageous tender" would allow

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process for any other stage of the life cycle of a product or service, *provided that they are linked to the subject-matter of the public contract…*" (emphasis added). Article 66(2) states as to award criteria:

> "2. The most economically advantageous tender referred to in point (a) of paragraph 1 *from the point of view of the contracting authority shall be identified on the basis of criteria linked to the subject-matter of the public contract in question*. Those criteria shall include, in addition to the price or costs referred to in point (b) of paragraph 1, other criteria linked to the subject-matter of the public contract in question, such as:
>
> (a) quality, including technical merit, aesthetic and functional characteristics, accessibility, design for all users, *environmental characteristics* and innovative character;…
>
> (d) *the specific process of production or provision of the requested works, supplies or services or of any other stage of its life cycle as referred to in point (22) of Article 2, to the extent that those criteria are specified in accordance with paragraph 4 and they concern factors directly involved in these processes and characterise the specific process of production or provision of the requested works, supplies or services.*"

Id. at Art. 66(c) (emphasis added).

[124] *Id.* The explanation in the COM 2011 states as to production processes:

> "Contracting authorities may refer to all factors directly linked to the production process in the technical specifications and in the award criteria, as long as they refer to aspects of the production process which are closely related to the specific production or provision of the good or service purchased. This excludes requirements not related to the process of producing the products, works or services covered by the procurement, such as general corporate social responsibility requirements covering the whole operation of the contractor."

[125] *Id.*

[126] Government Procurement Agreement, *supra* n. 24.

for greater consideration of environmental factors by eliminating the ability of agencies to consider only 'lowest *monetary* price' without regard to environmental criteria.

Third, as to LCA, the Commission could adopt the 2011 proposed provision that requires procuring agencies to use uniform lifecycle analysis, where it exists. Documenting LCA is a key way to identify products that are least carbon intensive, enabling the market to reward these products and thereby stimulate the development of the "green goods" sector. To transition to greater use of LCA, the Commission could also require vendors in the procurement process to use LCA to disclose supply chain emissions for their products, or it could integrate greater lifecycle analysis of embedded carbon into the EU Ecolabel certification process. Although full carbon accounting was initially regarded as too difficult when these systems emerged, footprint analysis will be easier with the EC's upcoming LCA methodology. Further, in the Ecolabel context, businesses that currently receive certification are arguably best suited to be those first required to integrate mandatory supply chain carbon emission disclosure, given their current expertise in demonstrating the other environmental attributes of their products. These steps could transition EU procurement towards broader use of LCA methodology, which could jump-start its wider application for other products in the consumer market at large.

Last, the use of LCA could enable the EC or Ecolabel to develop carbon standards by sector, if, for example, the Commission identifies the key components in each sector that contribute most to carbon emissions and then mandates core procurement criteria or PPMs to prefer products that minimize those emissions. While this is already done generally for environmental factors in many product categories, here this could be tailored specifically to lifecycle analysis of greenhouse gas emissions. In this way, the EU could establish best practices or 'lifecycle GHG' benchmarks for each sector. This could "rank" products by LCA performance within given product sectors and make way for steep procurement preferences for low-carbon or zero-carbon products.

Whichever provisions the EC ultimately adopts in implementing its uniform LCA methodology and overhauling its procurement directives, even the rules as currently envisaged will expand the use of environmental PPM criteria and lifecycle analysis into government purchasing decisions. These, in turn, should create positive spillover effects in the larger market by promoting sustainable goods.

CONCLUSION

The European Commission has a history of incorporating environmental considerations into public policy and, to this end, it has increasingly sought ways to promote "green products" through government purchasing power. However, uptake of these policies has not been as robust as hoped for, and sustainable procurement varies greatly among EU countries, likely in part due to limitations in the 2004 Procurement Directives and the EU Ecolabel process that operate to somewhat restrict full consideration of environmental criteria into contract award criteria.

Nevertheless, upcoming policy changes will enhance the ability of EU countries to take upstream environmental impacts into account. First, the emergence of the EC's uniform LCA methodology will facilitate carbon comparisons among products, making it easier for procuring agencies to compare bids among products for which LCA has been voluntarily computed. Second, the EC's ongoing efforts to overhaul its general 2004 Procurement Directives will have a direct impact on green purchasing by shaping the degree of leeway that Member States have to voluntarily take environmental criteria into account in product procurement, as well as the degree to which the Commission may mandate them to do so. These changes will likely operate to give Member States greater authority than under the existing directives to incorporate, and perhaps require, cradle-to-grave carbon analysis in their product procurement policies. The choices the EC makes as to these procurement policies, particularly on the issue of embedded carbon in products, could have far reaching effects by contributing to wider adoption of LCA accounting that prompts greater supply chain control of GHG emissions in the consumer products sector.