

Topic C Briefing Paper: Green Public Procurement

This briefing paper was drafted by Ricardo-AEA and Gluckman Consulting on the basis of a study currently being carried out for DG Clima. It is intended to provide some background to participants at the Consultation Forum according to Regulation (EU) No 517/2014, held in Brussels on September 10th 2015. Topic C concerns Green Public Procurement (GPP) and its use to promote low GWP alternatives to HFCs.

1. Context of Topic C

Public authorities spend 2 trillion euros annually; the equivalent of 19% of the EU's gross domestic product¹. This purchasing power means public procurement provides the opportunity to help drive purchasing in a number of positive directions, including to stimulate demand for products and services with a lower environmental impact, and to support innovative products.

The European Commission's **Green Public Procurement (GPP)** policy² is *'a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured.'*

Established in 2008, EU GPP is a voluntary policy instrument, which creates specifications for specific goods, services and works that public authorities commonly purchase, such as paper, textiles and buildings. These product specifications are based on the key environmental impacts of the product group from a life cycle approach and go beyond the minimum performance requirements. The EU-GPP scheme forms part of a range of product policies implemented by the European Commission, which also includes the Ecodesign Directive, Energy Labelling Directive, and the European Ecolabel.

Many Member States have their own public procurement approaches and these usually closely resemble the European approach, in some cases going beyond the European level requirements.

Beyond Europe there are a number of important examples of action being taken by other countries including the USA promoting public procurement in relation to low GWP alternatives (at Federal level procurement). At a global scale, this opportunity within public procurement to drive adoption of HFC alternatives has also been recognised at the G7 meeting in June 2014³, through the CCAC statement from September 2014⁴ at the Ban-Ki Moon summit on climate which stated "We will take action to promote public procurement of climate-friendly low-global warming potential (GWP) alternatives whenever feasible and gradually transition to equipment that uses more sustainable alternatives to high-GWP HFCs", and finally, the first UNEP workshop in South Korea, Asia, to promote public procurement of HFC alternatives⁵.

¹ Current figures given on the EC GPP website, http://ec.europa.eu/environment/gpp/what_en.htm

² Public procurement for a better environment, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52008DC0400>

³ The Brussels G7 Summit Declaration, Point 11, http://europa.eu/rapid/press-release_MEMO-14-402_en.htm

⁴ Phasing Down Climate Potent HFCs, Climate and Clean Air Coalition (CCAC) www.unep.org/ccac/Portals/50162/docs/ccac/initiatives/HFC/HFCs.pdf

⁵ UNEP-USEPA organise first Workshop on Promoting Public Procurement of Climate Friendly Alternatives to HFCs in Asia Pacific, www.unep.org/ozonaction/Portals/105/documents/news/7725-e-info_note_GPP_workshop_%20ROK.pdf

2. DG Clima Study on Public Procurement

The aim of this study carried out by Ricardo-AEA and Gluckman Consulting was to determine the extent to which F-gases are taken into account within public procurement in Europe currently and to identify promising target areas for promoting low GWP alternatives to have maximum impact.

Inputs were gathered from three distinct sources: The EU Green Public Procurement scheme⁶; Member State F-gas procurement approaches gathered through a Member State survey, released to GPP Experts (via DG Environment) and through key procurement portals. The main emphasis was on RACHP⁷ applications, but fire protection systems and foams were also considered. Further, broader information was gathered through consideration of Member States' National Action Plans (NAPs) for GPP (see below) and additional desk research and follow up with key countries and contacts.

Products, goods and services procured by the public estate cover a very broad array, and within this the range of products that may include F-gases and be affected by the phase-down is considerable. Procurements at the national, regional and local government level will all be affected. See Appendix 1 for a detailed list of products considered within this work.

3. Preliminary Findings

F-Gas requirements in the EU GPP scheme

Within the EU GPP scheme there are four product groups that address F-Gas use within their comprehensive criteria. The rationale of the specific requirements varies between the product groups, and takes into account a range of factors including other legislation, status of the market and concerns over the safety of alternatives:

- Food and catering services - equipment free of HFCs
- Transport – a car with AC, GWP ≤ 150; a bus with AC, GWP < 2500, public transport services with AC, GWP < 2500
- Electrical and electronic equipment used in the health care sector - Extra points awarded if GWP < 10
- Water based heaters - Primary refrigerant: GWP < 2000.

EU GPP has the potential, if criteria on refrigerants were used widely, to support the implementation of the F-gas Regulation, helping drive the phase-down of F-Gases by promoting a larger market share of innovative equipment using low GWP solutions.

In 2003, the European Commission in its Communication on Integrated Product Policy (IPP) encouraged Member States to draw up publicly available National Action Plans (NAPs) for greening their public procurement⁸. Not all countries have NAPs. NAPs set out generally very broad themes, priorities, and commitments for GPP in each State. Generally the product groups that are considered

⁶ http://ec.europa.eu/environment/gpp/index_en.htm

⁷ RACHP: refrigeration, air-conditioning, heat pumps including both mobile and stationary applications

⁸ http://ec.europa.eu/environment/gpp/action_plan_en.htm

to be a priority are cited, and directions to the guidance documents given. These guidance documents are designed to provide advice to public procurers.

F-gas requirements in public procurement at Member State Level

As well as the European level scheme, which is strictly voluntary, Member States may also have their own approaches to procurement of F-Gases and their alternatives. There may also be different schemes at regional and municipal level. The Member State survey explored this, asking about the common product area types for public authorities, including Government Offices, Healthcare, Public Services, Education and Social Housing, together with the common equipment types e.g. air conditioning, heat pumps, fire protection, insulating foam and refrigeration.

The responses to the GPP survey were limited, with responses from only eight Member States, plus Norway. The responses often provided limited detail. While this overall response is disappointing, we believe that there is an important message here - the response rate itself is a reflection of the fact that there does not seem to be, across the board, significant use of GPP to address the topic of F-gases and promote the use of alternative low GWP refrigerants within the EU today. Indeed we conclude that GPP use in the Member States to date has not yet much focused on this area.

The table below provides a summary of the product groups this covers for the Member States that indicate they have F-gas requirements in their GPP schemes. It is important to note that in some cases, for example the UK, there is a mandatory GPP system, but the criteria selection within the system can be voluntary. Appendix B provides further details.

Member State	Product Groups	Status of scheme
Sweden	<ul style="list-style-type: none"> • Vending equipment • Professional catering • Windows • Drug refrigerators • Low temperature tissue storage • Domestic scale refrigerators 	<ul style="list-style-type: none"> • Voluntary
United Kingdom	<ul style="list-style-type: none"> • Transport – air conditioning • Electrical Goods – Includes: air conditioning units, fridges and freezers, commercial refrigeration, condensing units • Office furniture (polyurethane foams) 	<ul style="list-style-type: none"> • Mix of mandatory and voluntary, depending on the 1) classification of the government department (central government or wider public sector); and, 2) the product group.
Belgium	<ul style="list-style-type: none"> • Domestic scale refrigerators 	<ul style="list-style-type: none"> • Indications are voluntary. Applies to <i>“In principle all federal, regional and local Belgian procurers”</i>
Ireland	<ul style="list-style-type: none"> • Proposing to use the EU GPP criteria for transport 	<ul style="list-style-type: none"> • The GPP scheme still in development. Policy and action plan have been created. It seems possible that GPP criteria could be made a mandatory requirement.

Of the Member States that indicated they do have F-gas requirements in their GPP specifications for particular product groups, the most extensive inclusion is by Sweden, then the UK. The Swedish criteria have been developed at a national level, with the level of importance given to different criteria informed through a life cycle assessment approach, which is similar to the approach used in EU GPP. The level of ambition of the Swedish criteria is comparable with that of the EU GPP requirements in many cases.

The situation in the UK is similar, with the transport requirements mirroring those of EU GPP, while the refrigeration and air conditioning requirements state a full ban on HFCs, which goes beyond the EU GPP requirements, and potentially beyond the Swedish requirements. Further there is a ban on the use of HFCs in the production of foams for office furniture.

The other two Member States that indicated in their survey response that they have F-gas requirements in their national level GPP criteria are Belgium and Ireland. Both of these Member States utilise EU GPP criteria within their national approach, with both using the food and catering services criteria, and Ireland also using the transport criteria. Austria's NAP highlights that for furniture HFCs cannot be used as blowing agents and that the city of Vienna has further requirements that ban the use of halogenated organic compounds in refrigeration, boilers, heaters and chilled water pumps.

Although Germany reported that GPP requirements do not address F-gas considerations, Germany also uses the Blue Angel Ecolabel within public procurement (it is partly designed with public procurers in mind), and this has F-gas criteria for six product groups, including cooling and freezing equipment, energy efficient data centres, climate friendly grocery stores, environmentally friendly ship operation and design, and energy saving heat pumps.

Finland, Netherlands, Denmark and Norway indicated that they do not currently have F-gas related GPP requirements. A number of reasons were provided, including that some Member States are still considering how they will best implement the F-gas Regulation and have not yet considered use of GPP. Others stated that F-gas requirements within GPP is not a priority, while others have adopted alternative approaches such as taxes on HFCs (For example Denmark and Norway). The Netherlands indicated that they do not have GPP F-gas requirements, and do not plan to include F-gas requirements in GPP in the future as voluntary measures are not seen as the way forward, rather mandatory horizontal measures, such as standards and legislation, are considered to be more appropriate.

Preliminary Conclusions

It is important to distinguish between inclusion of F-gas requirements in GPP criteria and actual use of these requirements in practice by public procurers. Ultimately there is little monitoring undertaken of either the EU GPP scheme or of environmentally friendly procurements at the Member State level. Given that GPP is a voluntary scheme, and that comprehensive criteria are the top level of criteria it is possible that despite such requirements existing the use of these criteria is actually very low. The low level of engagement of Member States with the survey combined with the evidence gathered to date and discussions with experts, would suggest this may be the case.

The aim of GPP is to go beyond minimum mandatory requirements and serve to pull the market towards environmentally innovative products, as defined by a life-cycle approach. In effect this has meant that GPP approaches to relevant products have to date focused more on the energy efficiency

or energy saving of products in the use phase, rather than the gas used. In areas where HFCs have already been mostly replaced, such as with small-scale refrigeration that as a consequence now uses hydrocarbons, GPP has little potential for additionality. However, in other areas GPP could be used to give focus and develop both the energy efficiency in use and the gases used ahead of the phase-down timetable to help pull such products through onto the market. Particularly relevant product groups are considered to be air conditioning within public buildings at all scales (including chillers, and DX and district cooling) and air conditioning in transport services. These groups are important as they contain a very high proportion of the HFCs purchased in the public sector.

4. Examples of the use of low GWP gases in the public arena

A number of case studies are being developed which examine examples of the use of low GWP gases in installations that are public spaces. The three examples below are illustrations of current practice:

- Airports (as examples of very large public spaces) using ammonia chillers to provide cooling, as seen at Terminal 5 at Heathrow in the UK, as well as Copenhagen and Stuttgart Airports.
- The London 2012 Olympic Games worked to ensure that “*HFCs must not be used where other safe, technically feasible, cost effective, energy efficient and more environmentally acceptable alternatives exist.*” The games achieved mixed success, with many of the new purpose built venues able to achieve this, but significant challenges were experienced for temporary venues and temporary catering establishments.
- Use of propane chillers (R290) at Aarhus University Hospital Skejby, Denmark replacing the R22 based chillers at this, the second biggest hospital in Denmark.

5. Stakeholder Input Required

Topic C, GPP, will be discussed during the afternoon session of the Consultation Forum on September 10th. Feedback from stakeholders will be a crucial input into the development of the final project report and recommendations. DG Clima are very keen for attendees to provide input into the discussion. Please take the opportunity to provide such feedback.

One of the aims of this task on public procurement is to identify and prioritise potential products groups where EU GPP could be used to help implement the F-gas Regulation by promoting the use of low GWP alternatives. Of the products identified as commonly using F-gases and of relevance in public procurement only a limited number have GPP requirements established that specifically address F-gases, either at a European level (EU GPP) or at the Member State level. Key questions that will be debated during the discussions are:

- How can GPP best be used to promote climate-friendly alternatives to HFCs, thus supporting the HFC phase-down while maintaining energy efficiency ambition?
- Which are the most promising target areas for the use of GPP in Europe, as regards replacing HFCs with low GWP alternatives?

Appendix A

Priority products for Green Public Procurement containing F-gases

Overall sector	Main market sector	Public sector users	Sub-sector	Equipment type	HFCs to be avoided
Office Buildings Education Buildings Healthcare Facilities Social Housing	Building Air-conditioning	Where temporary air-conditioning required	Small hermetic systems	Movable units	HFC 410A
		Small applications e.g. air-conditioning in single room Air-conditioning in 2 or 3 rooms Medium sized buildings, with several rooms cooled	Split systems	Single splits Multi-splits VRV and roof top units	HFC 410A HFC 407C
		Large buildings with chilled water Very large buildings	Chillers	Screw chillers Centrifugal chillers	HFC 410A HFC 134a
	Heat Pumps	Heating of social housing	Domestic sized	Air source, ground source	HFC 410A
		Large public buildings	Larger heat pumps	Various types	Various
	Fire protection	Museums, data centres – where the contents of the room will not be damaged by the fire system	Specialised building fire protection	HFC 227ea	
	Insulating foam	All building types	Polyurethane and extruded polystyrene insulation	Various	
	Catering	Refrigeration of food and drink	Office buildings, staff canteen facilities	Small hermetic systems	Domestic refrigerators Vending equipment Retail displays
Larger catering facilities e.g. hospitals, universities etc.			Split systems	Walk-in cold rooms	HFC 404A HFC 134a
Medical Applications	Refrigeration for medical	Hospitals, surgeries, mortuaries	Small hermetic	Drug refrigerators	HFC 404A

Overall sector	Main market sector	Public sector users	Sub-sector	Equipment type	HFCs to be avoided
	applications		systems	Low temperature tissue storage	HFC 134a
			Split systems	Cadaver and tissue storage Medical Scanners	
Scientific and Defence Facilities	Refrigeration in large specialised systems	Universities, research laboratories, specialist MoD facilities (e.g. wind tunnels), data centres	Industrial systems	Various	Various
Transport	Air conditioning	Trains			
		Buses			
		Car Fleets			
Infrastructure	Air conditioning	Tunnels		Various	Various

Appendix B

Status of F-gas requirements in GPP schemes

Sweden

More details on the sustainable procurement criteria currently in use can be found on the “Konkurrensverket” web site for the Swedish Competition Authority:

<http://www.konkurrensverket.se/en/publicprocurement/sustainable-public-procurement/use-sustainable-criteria/sustainable-procurement-criteria/>

United Kingdom

The UK government operates a system of sustainable procurement which is referred to as the Government Buying Standards (GBS).

The GBS are a set of product specifications for public procurers. They have 2 levels:

- mandatory
- best practice

The GBS are owned by the government department UK Defra with individual standards developed with input from across government, industry and wider stakeholders. They are extensively reviewed with market research and analysis to establish criteria that take long term cost effectiveness and market capacity into account.

Mandatory standards: for central government procurement

All central government departments and their related organisations must ensure that they meet the GBS when buying goods and services for those product groups covered. The mandatory standards are encouraged for the wider public sector to specify in tenders.

Best practice: voluntary standards for any organisation

Best practice standards have more or stricter criteria. They are for any organisation concerned about sustainable procurement to follow or to specify in tenders.

As an example, the Government Buying Standards for Air Conditioning Units specifies that for refrigerants *“Chlorofluorocarbons (CFCs) must not be used as refrigerants. Virgin hydrochlorofluorocarbons (HCFCs) must not be used as refrigerants. Hydrofluorocarbons (HFCs) must only be used where other safe, technically feasible, cost effective and more environmentally acceptable alternatives do not exist.”*

For further information see:

<https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs#specifications-for-the-gbs-listed-by-sector> .

Ireland

Ireland has GPP procedures. There is a guidance document “*Green Tenders: An Action Plan on Green Public Procurement*” which sets out the mechanism of integrating GPP into the procurement process.

The document explains the award criteria that can be used:

“With regard to the Award Criteria, contracts may be awarded on the basis of either (i) the lowest price or (ii) the most economically advantageous tender (MEAT). Where contracts are to be awarded on the latter basis, environmental criteria included in the Award Criteria must be:

- *Clearly mentioned in the tender*
- *Related to the subject matter*
- *Objectively quantifiable and verifiable*
- *Weighted (e.g. stating what %-age of the overall marks are given to a particular award criterion).”*

This suggests that HFCs could be introduced as an environmental criterion to influence purchasing decisions (in addition to other “objectively quantifiable and verifiable” criteria).

For further information see:

<http://www.environ.ie/en/Environment/SustainableDevelopment/GreenPublicProcurement/PublicationsDocuments/FileDownload,29208,en.pdf> .