



BUY SMART

Green Procurement for Smart Purchasing

Procurement and Climate Protection

Guideline for procurement of
appliances, lighting, vehicles, and power
with criteria of energy efficiency and environment

General Module

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1. Introduction

In order to fulfil the obligations of the Kyoto Protocol, the European Union must reduce its CO₂ emissions by 8 % until 2012.

The activities that help to achieve the defined targets range from promoting renewable energies and implementing energy conservation in buildings to wide introduction of green procurement principles among public and private purchasers.

The procurement of public and private sectors comprises a large deal of each country's gross domestic product per year, for instance public sector in EU makes around 16 % of its GDP. The public sector is a major professional buyer, or rather the major demander in the European Union with a purchasing power of around 1,500 billion EUR per year. In combination with purchasing power of commercial companies, the market position for professional buyers increases continuously. Beside the environmental effects caused by procurement decisions, procurement in general could have an intensive influence on the future product development. However, in comparison to global operating manufactures, the national and regional professional buyers have fewer means to put their ideas into practise. A possibility to increase the power of demanders – outside bundling of procurement orders (cooperative procurement) – is the use of energy labels or rather their established criteria.

2006 year Sustainable Development Strategy set a target for EU countries to reach current level of the Member States best performing in Green Public Procurement. Commission's Communication from July 16th, 2008 defines this target as 50% to reach for each Member State starting from year 2010.

According to the research made by PricewaterhouseCoopers 7 most advanced European countries in terms of environment (Green-7) – UK, Austria, Sweden, Finland, Denmark, Germany, and Netherlands have achieved 45% of amounts spent on purchases according to the Green Public Procurement principles in years 2006/2007. The main groups of products where greener purchases were made were furniture, electricity, paper, and office IT equipment. [Collection of statistical information on Green Public Procurement in the EU, PricewaterhouseCoopers 2008]

Energy labels are available for office and consumer electronics, appliances, lighting as well as for green electricity. During the last several years several procurement instruments have been developed in Europe and green procurement has been actively promoted among public and private purchasers. Project "Buy Smart" funded by the European Programme "Intelligent Energy – Europe" is a consistent continuation of GreenLabelsPurchase project aimed to promote, implement and further develop the instrument of green procurement (procurement of energy efficient products) in private and public institutions, using previously developed green procurement guide-

lines and instruments.

This guideline aims to provide information and advice on procurement process including legislative and practical information. The consideration of energy efficiency and climate protection in a tender procedure integrated in comprehensive environmental management systems or in single procurement processes is not only useful to improve the environmental conditions but also to support a sustainable economy. Therefore, this guideline offers a reliable support in respect to energy conservation potential as well as helpful advices.

This guideline is meant for:

- professional buyers and purchasing agents,
- environment and energy agents, and
- advisers

who recognise the procurement of appliances and energy as an instrument for climate protection, sustainable business conduct and who will implement it accordingly to their possibilities.

Content of this guideline:

- the legal framework of tender procedures considering environmental aspects,
- possibilities for the integration of relevant environmental criteria in the procurement policies,
- compliance with legal framework limitations,
- integration of environmental aspects in different steps of the procurement under respective consideration of different procedures and evaluation criteria, and
- practical step-by-step advice on how to perform a green procurement procedure.

The general part describes the basis for the procurement of different products that are relevant for a company or institution. Different guidelines have been developed for specific product groups: “office equipment”, “household appliances”, “lighting”, “green electricity”, “vehicles”, and “building components” and can be applied accordingly to your individual requirements.

The predominant parts of this guideline are criteria for energy-use since the potential energy conservation implies ecological advantages that are often accompanied by economic advantages. The extension to other environmental relevant criteria (e.g. environmental labels) is of course possible and desired. Therefore, we recommend the bibliography for ecological procurement at the end of this guideline.

2. Legal framework for green procurement

Procurement law on national and international levels should increase competition between different suppliers without any preferential treatment or discrimination. Therefore, its aim is to provide transparent and verifiable conditions that secure the best price-performance ratio for all purchases. The instructions support the free trade between the countries and increase the competition between suppliers.

2.1 Private Procurement

a) Private companies are not bound to the legal regulations as the public sector.

Private companies are not required to act within the legal procurement requirements during their procurement procedure. Environmental protection measures and optimised energy and material usage are usually in line with economic advantages and increase the competitive position. However, there are no legal obligations or restrictions to consider such criteria in private procurement.

Enterprises and projects which are largely (more than 50 %) subsidised by national institutions or which act as public purchasers represent an exception. In order to avoid competition distortions during these procurement procedures they have to comply with European and national procurement law.

b) If a company works with an environmental management system, environmental criteria are recommended by adopted procurement procedures.

Environmental management systems are defined by international standards (ISO 14001) and the EU regulation (EMAS). The aims of the European Union environmental management system are to encourage environmental-friendly activities, products and services and their sustainable realisation. The participating companies have to include these environmental goals in their corporate governance. The sustainable procurement is an elementary part of environmental management and will be considered more in private companies in the future.

2.2 Public Procurement

There are legal obligations for the public procurement. The legal framework is regulated by national and European budgetary and competition law and covers:

- efficient use of public money,
- prevention of preferential treatment or corruption.

The following principles for public procurement in respect of ecological criteria are basic requirements:

a) Public purchasing agents are bound to procedure obligation during the procurement processes

The fundamental basic requirements of the tendering directives are determined by primary law and comprise the principles of non-discrimination, equal-treatment, transparency and competition. Furthermore, several EU-directives implement the legal framework for the public procurement. The directive 2004/18/EC that has replaced the directive 93/36/EEC is one of them. The procurement rules contain instructions concerning the choice of contractors and the evaluation of offers.

The procurement directives are valid for all public supply contracts. The paragraphs for the implementation of the EU instructions concern orders, which reach a certain threshold. The instruction aims on opening international markets and on enhancing competition. Furthermore, procurement should avoid discrimination and therefore has to be more transparent. Additionally, public purchasing agents should also use public guidelines.

Procurement instructions have to be adopted on federal level, state level, municipalities and legal entities of public law (organisations, institutions). The procurement instructions also apply for legal entities of private law, which are publicly funded or the state holds the majority (e. g. hospitals, public waste disposal enterprises, residential sector). These organisations are non-profit and operate for general public interests.

b) Public assignments have to be tendered publicly on national level

The principles of the EU treaty apply if the assignment has a value below the threshold in order to guarantee transparency, open procedures and fair competition between suppliers. A restricted or negotiated procurement procedure is only possible under certain circumstances, designed in national law (see chapter 3.1).

c) Public orders of a specific threshold have to be tendered publicly inside the European Union

Public departments are bound to comply with the EU directives which demand a pan-European procurement process for public works contracts, public supply contracts and public service contracts above specific thresholds. The thresholds [Amendment Article 8.1 from 01/01/2010] are for:

- Public works contracts: 4,845,000 €
- Public supply and service contracts of
 - Public purchasers 193.000 €
 - Federal government authorities 125.000 €
 - Energy-, Water- und Traffic supply institutions 387.000 €.

d) The consideration of environmental aspects is consistent with the applicable national and European law in a procurement process

The EU directive 2004/18/EC provides the basis for the consideration of environmental aspects in the awarding procedure. There are different possibilities to incorporate environmental aspects into the awarding procedure (see e to g).

Instruments like energy or environmental labels can be considered in the purchasing decisions. Additional costs caused by environmental compatibility are principally accepted, as long as they are associated with saving costs in the short and long term.

Furthermore, the purchaser is free to determine acceptance criteria as long as they comply with the EU treaty, the principles of the EU and if they are objective, transparent und non-discriminating. These principals are the basis for every public national and pan-European call for tenders. Thus national procurement is similar to pan-European procurement processes.

e) Environmental aspects

The performance requirements offer possibilities to include environmental aspects in the procurement procedure. It contains the way and complexity of the offered service. The performance requirements have to be connected with the assignment and formally stated in the tender documents. The non-fulfilment of an assignment criterion results in the exclusion from the awarding procedure.

In an environmental-friendly call for tenders, a special production procedure (e.g. electricity produced with renewable energy sources) could be made obligatory in order to specify visible and invisible product requirements. Labelling with a compulsory energy label – like the EU-Label – could be directly incorporated into the assignment description. Voluntary energy and environmental labels can be applied to verify the technical performance requirements. Other verifications of the criteria fulfilment have to be accepted as well.

f) Environmental aspects in acceptance criteria

Acceptance criteria serve as tool to evaluate the most economic offer and provide an advantage for the purchaser (e. g. for the eco-management and audit scheme). They have to be related to the assignment and their degree of importance has to be stated in the contract specification in order to secure the non-discrimination of bidders.

Environmental relevant acceptance criteria can be established as well. The low power input of comparably expensive office devices and low CO₂-emissions (by the means of green electricity) are additional aspects for the offer. The environmental relevant acceptance criteria should be based on the environmental aims of the current institution. Thus, one avoids including invalid criteria.

g) Valuation of the most economic offer

There are two alternatives for accepting an offer. Firstly, it is possible to choose a low priced offer which fulfils the minimum criteria. Secondly, the most economic offer in terms of a beneficial price-performance ratio can be chosen. All costs of the product or service lifespan (life cycle costs) will be considered (e.g. energy, maintenance, disposal costs). Thus, hidden follow-up costs can be revealed and can contribute to identify the low priced offer as an uneconomic one. Only the product life cycle costs starting from the tender evaluation till the end of performance delivery are considered. External costs such as environmental damage may not be taken into account in order to determine the most economic offer.

The latter alternative to determine an economic offer is recommended, because of its rational cost-saving approach which especially applies for the public authorities.

2.3 Ecodesign Directive

Ecodesign Directive 2009/125/EC that came into force in October 2009 settles a framework for defining requirements for energy and environmental performance of energy-using and energy-related products. It implies introduction of improvement of environmental performance for products, by introducing legal requirements for such critically important energy consumption criteria

as standby energy consumption and off-mode consumption, energy consumption reduction during a product's life cycle, etc.

By introducing different targets, criteria, and measures Ecodesign Directive will guide product producers to production of more sustainable range of products thus investing in greenhouse gases mitigation and climate improvement.

Also, the Directive involves a requirement for a manufacturer or a supplier to provide environment – and energy-related information to the consumer to ensure a best application of the product in terms of energy consumption and environmental performance. The directive will affect the main groups of products: lighting, household appliances, electric motors, etc.

Rules and criteria provided in the framework of the Directive will help to improve and upgrade the requirements to be used in green procurement procedures together with (or even updating) the criteria that are used now based on requirements of energy and environmental labels.

Further information:

<http://ec.europa.eu/enterprise/policies/sustainable-business/sustainable-product-policy/ecodesign/>

3. Procurement methods and procedure

Different awarding methods are applicable depending on the product and order value. Hence, different alternatives are possible to integrate environmental criteria into the procurement process. The procurement procedure will be outlined here in order to show the integration of environmental criteria into the individually selected steps. Further considerations refer to open procedures. The private purchaser shall feel free to incorporate the regulations of the open procedure in his company.

3.1 Procurement methods

Public purchasing agents are bound to the requirements of the procurement procedures and contractual requirements, which are stipulated in the national procurement directives. If orders are above the thresholds then they are subject to the procurement law of the European Union, which demands a pan-European Union procurement procedure.

The European tendering directive differentiates between three awarding methods:

- Open procedure
- Restricted procedure
- Negotiated procedure

a) Open procedure

Usually public tenders have to be announced publicly. Therefore, the purchaser tenders the order publicly on European Union level on: <http://ted.europa.eu>. All interested bidders can submit an offer while unrestricted competition is ensured. Environmental relevant criteria can be integrated into the tender documents within the legal framework.

b) Restricted procedure

A restricted procedure is only possible under certain conditions. Only a limited number of companies are requested to file a tender in this procurement procedure. The group of possible bidders can be determined ex ante by a declaration of interest or by the means of a public competition in order to narrow down possible bidders after the suitability examination. At least three to five suitable applicants should be requested to submit a proposal. The same requirements to adopt the environmental criteria as for the open procedure apply.

c) Negotiated procedure

The purchaser is free to choose among the procurement methods as long as the basic principles

of the procurement directives are fulfilled. The procedure can be accomplished with or without previous proclamation and/or public competition. The assignment content has to be negotiated with selected companies.

The single tender action is only possible in individual cases. The prescribed ranking (if possible, a public call for tenders) should guarantee an extensive competition and procedure transparency. For more information please visit: <http://simap.europa.eu>

3.2 Procurement procedure

The process of a specific procurement is embedded in the procurement policies of the entire institution. This connection is represented in the following diagram for the individual steps of procurement.

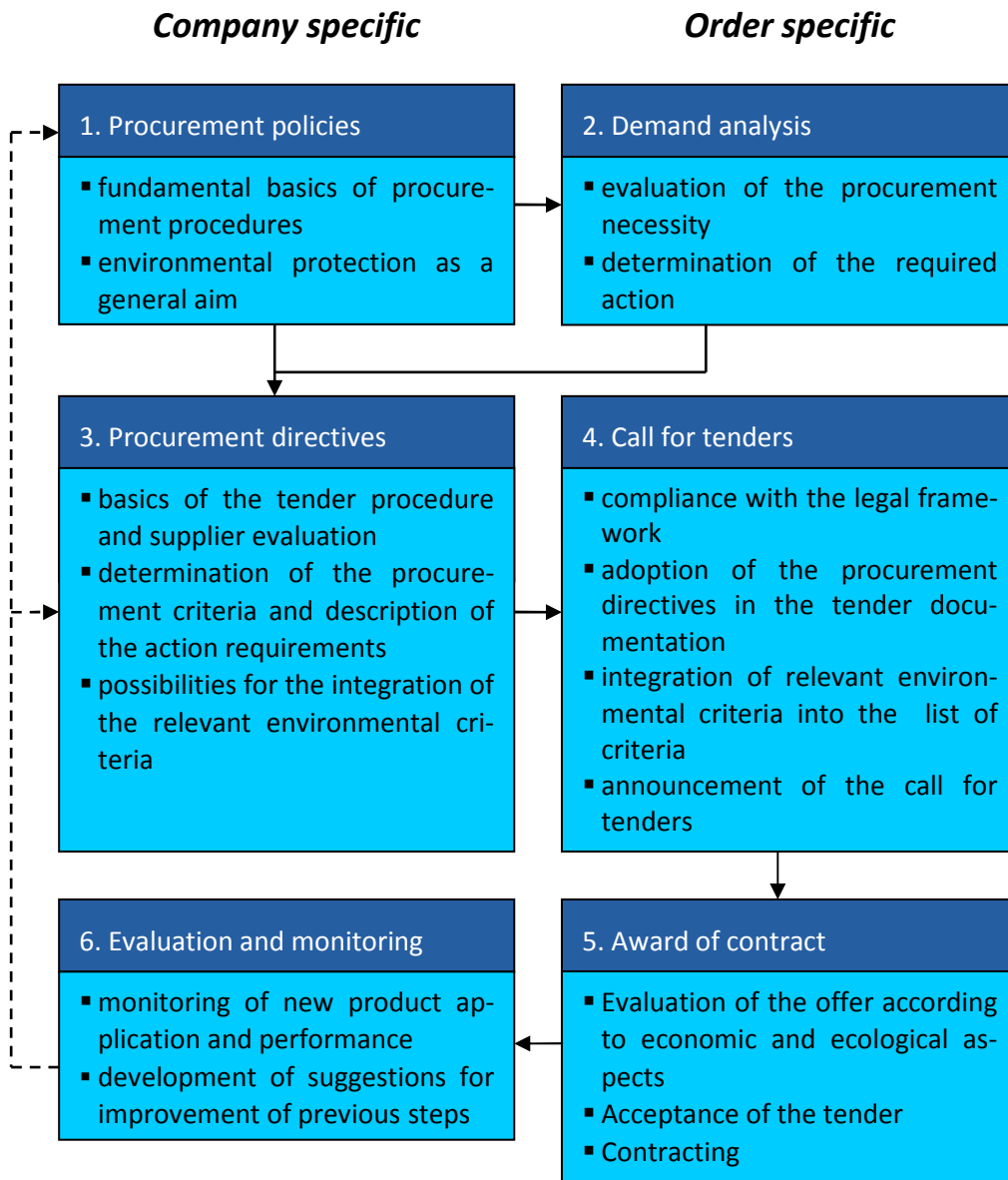


Illustration 1: Procurement Procedure of a Public Call for Tenders [Based on information provided by Berliner Energieagentur GmbH: Igöb 2000]

3.3 Energy and environmental criteria and requirements

The first stage of the developed procurement procedure is based on the requirements that are introduced as criteria for evaluation of an offered product.

These requirements often imply both environmental criteria and the energy performance of a product.

The requirements and criteria were carefully selected based on a study performed in the framework of GreenLabelsPurchase project that involved analysis of existing energy and environmental labels. Labels in EU are used as a complementary tool to reduce energy consumption of products and help consumers make their decision when choosing a product from an offered range.

Guidelines for each group of products contain description of those labels that were used as a basis for development performance sheet for each specific product.



3.4 Environmental criteria for different procurement phases

Environmental relevant criteria can be considered and incorporated into different phases of the procurements process (see illustration 1). The possibilities are described as follows:

1. Procurement policy

It is advisable to apply the general principles of the management policy to the procurement policy before the actual procurement procedure begins. Most corresponding guidelines are already embedded in the procurement policies in the case that the company or the institution works with an environmental management system or considers strongly environmental goals. Environmental criteria have more importance during the awarding, because they are supported by the management of the company.

2. Demand analysis

Here the necessity of the procurement and its complexity are examined. Thereby, possible alternatives to the purchase of the product e.g. the repair of old devices or leasing of a new product as

well as measures to improve efficiency and synergy of environmental friendly aspects, are examined. A critical and exact demand analysis is one of the most important steps for an environmental friendly procurement.

3. Procurement policies

Companywide technical, economic and also ecological product requirements are specified in the procurement policies. The characteristics have to be exactly specified and economically measurable. The performance indicator "environmental fairness" would be too unspecific. Permissible ecological performance indicators are e.g. approximate values for the power or water consumption of devices as well as maintenance and disposal costs. The relevance of the individual criteria can be emphasised by different weightings.

Criteria of a certain label can be incorporated here. Obligatory labels can be directly considered as minimum requirements. In the case of voluntary labels, only the compliance with the required marginal values can be requested due to the non-discrimination principle.

The procurement policies should also comprise the evaluation basis of the most economic offer. This includes schemes for an operating cost analysis as well as the evaluation of different life cycle costs.

4. Call for tenders

The procurement directives with the established performance indicators will be transferred to the tender documents and specified if necessary. Requirements with respect to the network ability of PCs can be considered as well as certain energy efficiency categories for household appliances.

It is possible to integrate additional requirements directly into the present procurement document. General valid environmental performance sheets can be used for different device classes if multiple environmental relevant criteria should be included in the procurement process.

5. Awarding procedure

It has to be determined first whether the offer fulfils all minimum requirements (mandatory criteria, see chapter 3.4). The offer evaluation can be carried out with the help of an operating cost analysis. The calculation methods for the electricity and operating costs are specified at the beginning of the call for tenders. In order to compare the different offers, several calculation tools are available in the context of the modules of 1 to 5 of this manual. An environmental friendly

procurement is determined by the strong consideration of the criterion "operating cost" in order to accept the tender.

Another possibility to integrate environmental and/or energy criteria is the admission of mandatory and optional values into the call for tenders. The tender is accepted with fulfilment of all mandatory criteria after having evaluated the optional criteria in relation to other quality factors to determine the most economic offer.

3.5 Evaluation of the offers

The most economic offer which fulfils the demanded requirements has to be chosen. The life-cycle costs (here in particular the energy costs and costs of the CO₂-reduction) in addition to the offer price (option A in illustration 2) is the first step for the evaluation of the most economic offer if environmental interests should be considered more strongly. The life-cycle costs in relation to the asset costs provide the adjusting instrument for a sustainable business conduct.

Additional environmental relevant criteria that cannot comply with the procedure described above can be incorporated in the call for tenders. They can be included on one hand as mandatory criteria (minimum requirements) and on the other hand as optional criteria in order to facilitate as indicator for the best business conduct. The optional criteria are considered according to their relevance in similar manner as for the life-cycle costs above to determine the best offer. In general the combination of the mandatory (must) and optional (target) criteria is useful, as shown in option B in illustration 2.

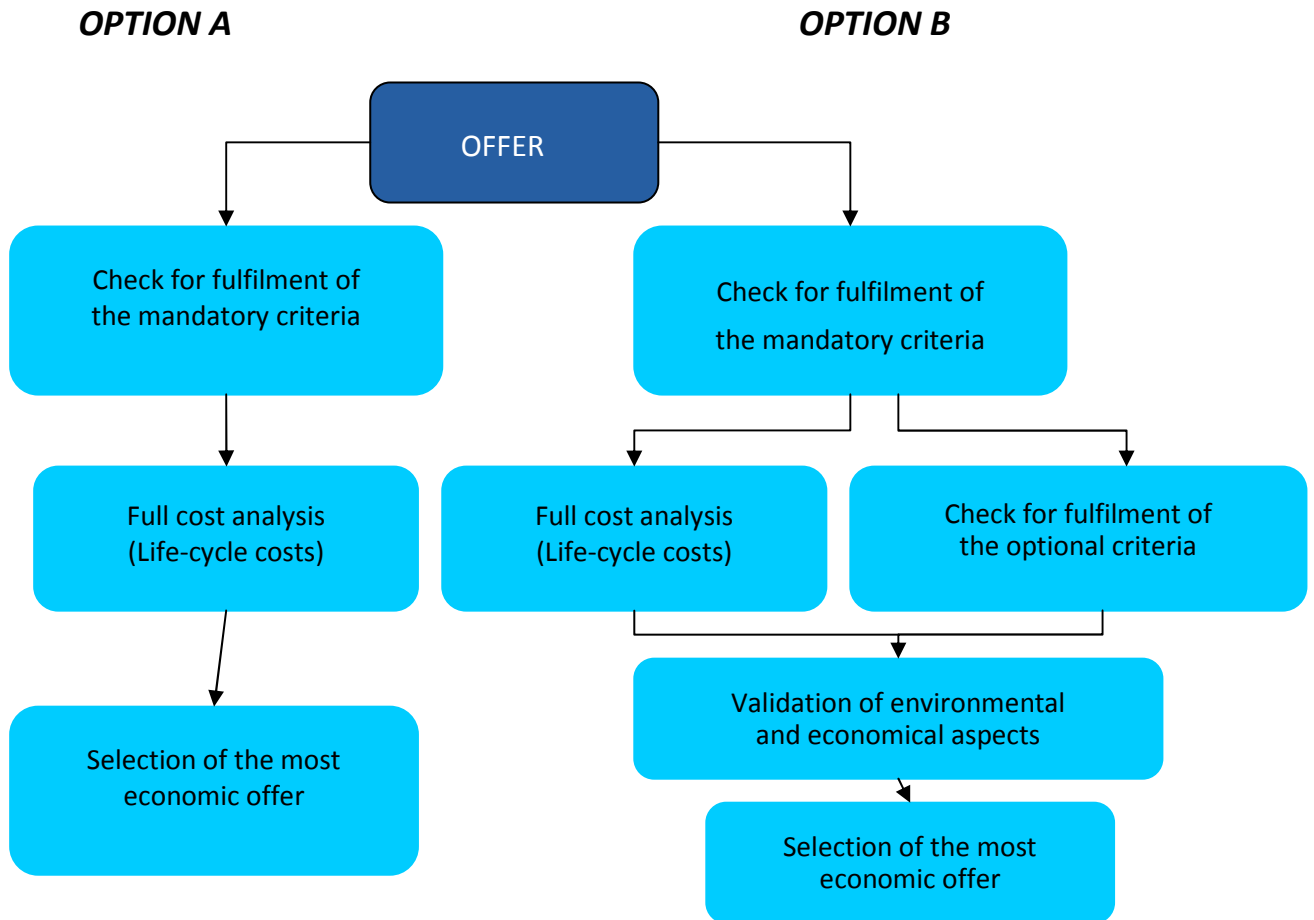


Illustration 2: Offer valuation according to different options

The following factors have to be considered if energy-related environmental interests are included in the calculations:

- Providers must guarantee the maximum level of power and energy consumption for the calculation.
- Factors such as yearly utilisation periods in different operating modes should be realistically measured and empirically secured if possible.
- Technical measures to reduce the energy consumption should be considered if possible e.g. energy management in PCs and auto power off function.

The inclusion of environmental criteria is based on the definition of mandatory criteria (also

minimum criteria) as well as the criteria that contribute to a more positive offer evaluation.

a) Mandatory (must) criteria: These criteria will be included in the performance specifications and must be fulfilled by the service or product supplier (e. g. the maximum capacity of the electrical equipment). A non-fulfilment of a mandatory criterion excludes the offer from the call for tenders. This procedure demands strict compliance with central environmental criteria.

b) Awarding (target) criteria: These criteria are evaluated with the help of points and considered in relation to other awarding criteria during the awarding process. The total score of the optional criteria (altogether 100 % is possible) represents the degree of compliance with environmental characteristics such as recycling ability or energy efficiency. They enter the offer evaluation depending on the assigned importance of these criteria. Thus, economic and environmental interests can be weighted accordingly.

In principle environmental interests can have a strong impact even without the compliance with mandatory criteria, if they are evaluated with a high score as optional criteria. Thus devices, which do not fulfil a certain criterion, have a possibility to be considered, as long as the sum of the environmental characteristics convinces. However, with adopting this approach the firm's objective cannot meet the requirements reliably.

4. Practical instructions

The environmental, energy, quality, and other criteria are used for evaluation of the tender offers by being integrated in performance sheets as must and/or target criteria dependent upon on choice of procedure.

Mandatory (must) criteria define obligatory requirements for offered products. Inability to offer a product that complies with the defined criteria automatically excludes a participant from the tender.

Awarding (target) criteria bring additional points to the participant's offer when applying a comprehensive procurement procedure. The points are assigned based on importance of different aspects of the purchased product. Maximum possible number of points is 100, which means that offered product complies with all required criteria.

Please follow these steps to perform a green procurement:

- Chose a simplified (Option A) or a comprehensive (Option B) procurement procedure
- Send an invitation to participate in the tender and respective performance sheet to the selected suppliers/sellers. Indicate that offers are to comply with must criteria, otherwise ex-

cluded. Make sure that your tender respects local legislative requirements.

- Select those offers that comply with must and legislative criteria.
- Use calculation tool to select the best economical offer: insert information related to the use of the product (cells in the life cycle cost sheet must be filled in); insert provided in the performance sheet information to the best economic offer sheet. The tool will show the best economic offer, that it the winner of your tender.

The instruments (performance sheets and calculation tools) for all groups of products are available for download from the project website www.buy-smart.info.

4.1 Performance sheets

With the help of the performance sheets environmental aspects that have been specified for each particular purchased or tendered product with an emphasis on energy efficiency and climate protection are being considered. The idea of the performance sheets is based on the check list of the Procurement Service of Austria.

The integration of environmental and/or energy criteria in tenders as mandatory and optional criteria is possible as already described in chapter 3.4. This option is also applied in the performance sheets. The adherence of the mandatory criteria can be examined clearly. The compliance with the optional criteria can be evaluated with the assignment of points, depending on the weighting. The score evaluation (maximum obtained score) is made in the column "optional". The total sum of the scores is 100 and symbolises 100 % of the optional criteria. Possible weightings and score allocations are already registered exemplary, but can be adjusted according to the respective preferences of the procurement offices.

4.2 Cost-Efficiency Calculation

The cost efficiency of an offer does not only depend on the purchasing price, but also on the operating costs. For the comparison of the offers the energy costs are evaluated over the expected useful life as well as the capital expenditure (life cycle costs).

Calculation tools are provided for each product to calculate the cost-efficiency of the offers. The product-specific performance requirements are to be filled in the empty fields of the excel sheets according to the information provided by the suppliers that participate in the tender and some in-house information. On the basis of the calculation results the offers can be compared and the most economic one be selected.

5. References

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