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GOING GREEN: BEST PRACTICES FOR GREEN PROCUREMENT

Meeting of the Leading Practitioners in Public Procurement

18 June 2014, at OECD Headquarters in Paris, France.

This paper is an update of the paper presented at the meeting of Leading Practitioners in Public Procurement at the OECD on November 7 and 8 2013, called Case Studies in Green Public Procurement Best Practices (GOV_PGC_ETH(2013)10). It includes an additional eight case studies of green public procurement best practices and updates some of the original case studies.

The case studies compiled in this paper, as well as new case studies which will be submitted, will be published by the OECD on-line.

Leading Practitioners are invited, by July 15 2014, to:
a. provide comments on this paper;
b. submit new case studies, in particular countries who have not already done so; and
c. update submitted information if required.

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GOING GREEN: BEST PRACTICES FOR GREEN PROCUREMENT

1. In 2012 OECD countries reported on the challenge of using green public procurement (GPP) in a transparent and cost-effective manner[1]. As a result, the OECD Public Governance Committee called for the development of a compendium of GPP best practices based on countries' experiences.

2. The framework for collecting GPP best practices was set in a discussion paper on "Mapping Out Good Practices for Green Public Procurement"[2] developed by the OECD in 2013 and discussed in the first meeting of Leading Practitioners in Public Procurement on 11-12 February 2013 at the OECD. The framework is based on the following six dimensions for successful GPP implementation:

1. Setting a GPP legal and policy framework to assist buying entities;

2. Planning GPP, including understanding solutions and market capacity as well as assessing costs and benefits;

3. Introducing environmental standards in the technical specifications, procurement selection and award criteria, as well as in contract performance clauses;

4. Professionalising GPP;

5. Raising awareness on GPP solutions; and

6. Monitoring the results of GPP.

3. During 2013 and 2014 public procurement experts from the OECD and key partner countries submitted GPP case studies. This paper compiles the case studies submitted, which will be published by the OECD online.

[1] http://www.oecd.org/gov/ethics/combined%20files.pdf
[2] http://search.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=GOV/PGC/ETH(2013)3&docLanguage=En

DIMENSION 1. GPP LEGAL AND POLICY FRAMEWORK

4. The case study from Korea is an example of regulation helping promote GPP, through the adoption of the Act on Encouragement of Purchase of Green Products. The case study from Austria covers the procurement strategy for the Austrian Railways Infrastructure Corporation (ÖBB INFRASTRUKTUR AG).

KOREA

Context and objectives

5. Korea's green public procurement was first introduced in tandem with the Korea Eco-label under the Act on Development and Support of Environmental Technology of 1994. State agencies were recommended to preferentially purchase products awarded the Korea Eco-label. However, it remained inactive due to the limited number of ecolabeled products and the lack of a monitoring system.

6. Green public procurement took a more concrete form when the Ministry of Environment introduced the Act on Encouragement of Purchase of Green Products in 2005 (hereinafter the Act of 2005). At the beginning of each year, state organisations – i.e. central and local governments and public organisations – are obliged by the Act of 2005 to submit an implementation plan on green purchases of the year and the performance records of the previous year to the Ministry of Environment.

7. A series of consultations with the line ministries, public organisations, experts and the industry were conducted to agree upon the essence of the Act of 2005. It was concluded that the green public procurement be implemented in connection with the ecolabelling – i.e. Korea Eco-label and Good Recycled Mark – in order to minimise the administrative costs required to set the green procurement standards by each institute.

8. The adoption of the Act of 2005 has been instrumental in stimulating the development of ecolabeled products in both quantity and quality by leveraging the public demand. The total public expenditure in green purchases has more than tripled, from KRW 254.9 billion in 2004 to KRW 787 billion in 2005, with a further increase to KRW 1 727 billion in 2012. In addition, the number of products certified by the Korea eco-label increased by 3.8 between 2004 and 2012.

Implementation

9. The government does not set quantitative targets related to green public procurement, but each state agency must come up with its own voluntary target (e.g. estimated amount of green purchases and percent of green purchases in relation to the total purchases of the year) and report it to the Ministry of Environment. The Ministry of Environment expects the green public market to grow by 1.5 times over the next three years through 2015.

10. The products and services applicable for green public procurement are defined by the Act of 2005 as: i) certified or meeting the underlying criteria set by the Korea Eco-label; ii) certified or meeting the criteria of the quality certificate for recycled products (Good Recycled Mark); iii) complying with other

environmental criteria set by the Ministry of Environment following consultation with the heads of the relevant ministries.

11. According to the Act of 2005, state agencies should purchase green products and services for which the ecolabel criteria exist. In 2012, there were about 870 umbrella organisations comprising about 30 000 subsidiary organisations subject to the Act of 2005. Green procurement can be made in two ways. Each organisation can directly purchase green products and services. If the total amount of purchase exceeds a certain threshold, the purchase is commissioned by the Korea Public Procurement Service (PPS), a centralised public procurement agency. Or each organisation can require contractors to purchase green products in delivering their services (e.g. construction, MRO services) by including special conditions or green specifications in the contract. The product groups incorporate various product categories ranging from electronic appliances, office supplies and furniture to construction materials, etc.

12. The Korea Environmental Industry and Technology Institute (KEITI), affiliated with the Ministry of Environment, is operating the overall GPP system and the Korea Eco-label. The KEITI is in charge of collating green procurement implementation plans from the state agencies and monitoring the results. Furthermore, a variety of policies are also being exercised to supplement the GPP as follows:

- produce an annual guideline to inform procurers of the green procurement and monitoring procedure
- conduct trainings for procurers regularly and on demand
- publish the case studies and hold workshops to feature best practices
- give national awards and incentives to state agencies with good performance.

Impact and monitoring

13. In order to keep track of the progress of the green public procurement, three indicators are monitored by the KEITI: i) the number of public organisations that submit an implementation plan and performance records; ii) the total amount of annual green procurement in economic value and units; iii) green standards and specifications of the service contract and construction.

14. In order to collate data from the umbrella organisations, in 2005 the KEITI established an online platform, the Green Products Information System (GPIS) to make the monitoring and reporting process easier and more convenient. Linked with the PPS's electronic procurement system, the records of the green purchases procured through the PPS are automatically transferred to the GPIS. In addition, the records of the green purchases made individually by the organisations are added up if the respective organisations keep track of purchase data and upload them on the GPIS.

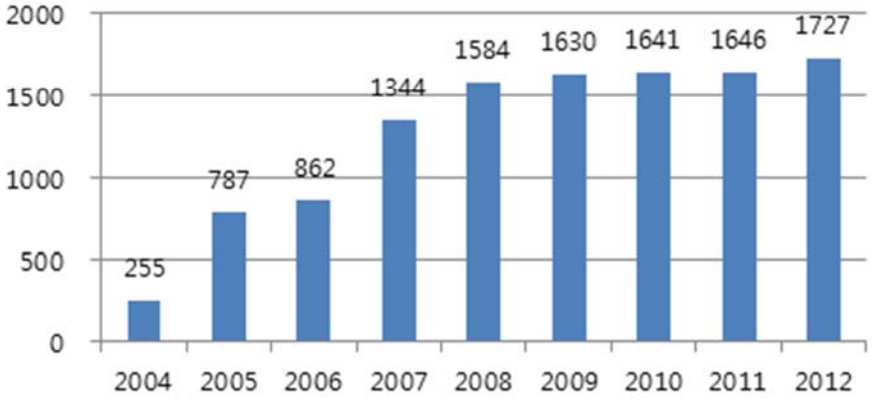
15. In total, about 60% of the national green procurement data is automatically reported via the GPIS, which greatly reduces the administrative burdens of both procurers and the KEITI in monitoring and compiling the results. An institutional arrangement between the key stakeholders – such as PPS (a national procurement agency), the Ministry of Environment and the KEITI was instrumental in setting up an integrated e-monitoring system.

16. The compiled green public procurement data by institution is uploaded on the website of the Ministry of Environment and the GPIS so that the public can easily access and compare the results. In addition, once the data is disclosed, the results are usually covered by the major media in Korea, which

encourages the competition among public organisations. In 2013, 96.4% of the state agencies submitted their implementation plans and records and 97.7% of the organisations reported their performance records.

17. The total amount of green public purchase rose dramatically during the first few years following the adoption of the Act of 2005 and continues to grow steadily. In addition, the economic, environmental and social impacts of green public procurement are annually calculated by the KEITI in order to communicate the benefits to the public. To date, the estimated reduction of CO2 equivalent emissions is 3.1 million tonnes, which can be translated into KRW 54.5 billion of economic savings. Social benefits are calculated in terms of 12 143 new jobs.

Figure 1. Trends in total amount of GPP in Korea (unit: billion KRW)



Source: eSPap

Challenges and risks

18. Green public purchases only account for 5-6% of the total domestic procurement executed by the Korean Public Procurement Service. This is partly due to the relatively high prices of certain green products, such as furniture and construction materials. In addition, complaints on the quality of some green products is another barrier hampering market uptake of green products.

19. In Korea, there are several regulations on public procurement exercised in a fragmented way. Therefore, "green" procurement may not be a priority for some procurers or organisations in the face of a number of other criteria (e.g. energy efficient, socially responsible) competing with the green. Furthermore, given that those criteria are imposed by different ministries on public organisations without co-ordination, the procurers shoulder the burden of reporting the records to the different ministries.

Key lessons learnt

20. Green public procurement in Korea has benefited from the already established green criteria of the Korea Eco-label and Green Recycled Mark. By linking these two policies, administrative costs to set the green procurement standards have been avoided by each institute, thereby inducing the rapid growth of the green public market. It was after the government's clear signal to scale up the GPP that green products became competitive and diversified in the market. This approach can be strategically replicated in developing countries considering the adoption of both ecolabelling and GPP simultaneously.

21. Green public procurement should go hand in hand with eco-innovation policies aimed at stimulating the market. By nurturing the green market, the product groups covered by the GPP can be

expanded, while ensuring the quality and price competitiveness of green products. In this regard, the Ministry of Environment establishes a Master Plan for Encouraging Purchase of Green Products every five years, elaborating a variety of policies aimed at promoting green production, distribution and consumption.

22. The green public procurement in Korea should be harmonised with other procurement regulations and criteria so as to minimise confusion and burdens of procurers. In the long run, the scope of green procurement should be expanded to incorporate both "ecologically efficient" and "socially inclusive" ones, thereby becoming sustainable public procurement.

AUSTRIA

Context

23. In 2008 the management board of ÖBB Infrastruktur AG (ÖBB Infra) decided to implement an environmental management system (certified according to ISO 14001), as a major pillar for the sustainable development of the company. A sustainability coordinator was nominated in July 2009 to deal with sustainability on a corporate scale, notably to develop guidance on sustainable procurement, as it was identified as one of the key topics related to the sustainability performance of the company. Given that ÖBB Infra's annual investment expenditure amounts up to 2 billion euro (app. 1% of Austrian GDP), procurement is deemed as an important lever for the development of sustainable economic operations throughout the enterprise helping to reduce the consumption of energy and resources. A guidance note on sustainable procurement was published in 2011.

Objectives

24. The sustainable procurement strategy aims at raising awareness of procurement officers for the integration of socio-economic criteria into the procurement process with a step by step approach in order to contribute to the following tasks, e.g.:

- Reduction of the consumption of resources, utilities and energy
- Avoiding waste and pollutant emissions
- Increasing quality
- Protection of biodiversity
- Reduction of internal and external environmental costs (e.g. costs for disposal or transport)
- Increasing the transparency and plausibility of costs
- Fostering innovation
- Fair working conditions and income
- Create "green jobs"
- Win suppliers as strategic partners

25. The strategy builds on the availability of information about relevant sustainability criteria and internal guidance on specific opportunities as well as marketing the idea among the responsibles.

Implementation Process

26. In early 2009 a working group was established to analyze the potential of sustainable procurement for the company, which led to setting sustainable procurement, is a permanent target within the environmental management system.

27. With the support of external partners (Austrian Institute for Building Biology - IBO and Procurement Service Austria). The work was focused on room for manoeuvre concerning the integration of socio-economic aspects into the procurement of consumable material and infrastructure projects and resulted in a guidance note, which was finally published in 2011.

28. The guidance note contains a short description of the general background of sustainable procurement concepts and why they are deemed to make sense, sums up initiatives and strategies in that field, points at the legal requirements and most importantly lists existing national and international eco-labels and their specific relevance for ÖBB Infra (and other infrastructure businesses) with an evaluation scheme. Criteria underlying the labels are explained and made transparent. The guidance note concludes with two practical examples concerning rail infrastructure construction, to provide a more concrete picture of how sustainable procurement could be realized.

29. In 2011 the management board adopted a decision with the following content:

- ÖBB-Infra AG commits itself to the principles of sustainable procurement;
- Procurement staff is instructed to integrate these principles into the procurement procedures;
- Check and if needed adaption of the internal regulations concerning contracting and procurement;
- Approval of the guidance note on sustainable procurement as a supporting document for procurement staff (integration into the management system).

30. A workshop was organized for procurement officers together with external experts. Sustainable procurement has become an integral part of internal training programs (e.g. “rail - ecology” seminar) and practical projects were set up to gain practical experience, especially in the field of construction materials and tension weights.

Impact and Monitoring

31. Awareness for sustainability aspects has generally increased together with the specific knowledge of all involved participants, notably the procurement officers. Practical information is now easier available. Sustainability was also set as a procurement principle for purchasing and materials management in the guidelines of the Austrian Railways Holding.

32. Specific monitoring measures are planned for 2012 with a focus on the use of materials (concrete) and weights, which will be a challenging task, as no fixed performance parameters or standards exist so far.

Challenges and Risks

33. A common phenomenon is the lack of resources in terms of staff to thoroughly monitor and evaluate the measures taken. In the field of construction materials research and the establishment of relevant technical standards is particularly complex, because it requires the adaptation of contract specifications. This also leads to an increased workload for procurement officers. It is therefore necessary to make positive effects visible through continuous dialogue and share best-practise examples.

34. Further, it will be important to develop standardised methods to calculate TCO, because they are often neglected in practice.

Key Lessons Learned

35. The success of a project requires the involvement and constant information of all essential persons at all stages. For this particular project cooperation with recognised organisations (Institut für Bauököologie and Beschaffungsservice Austria) and suppliers turned out to be especially helpful.

36. A key finding is that as long as external costs and the costs-by-cause principle are not integrated into economic assessments on an obligatory basis, procurement by the lowest costs principle will dominate in practice. This means that the development of sustainable procurement should become a standard rather than an exceptional procurement method to overcome the prejudice that sustainable procurement may constitute a competitive disadvantage. In this regard precise legal requirements could be most effective to promote "green" objectives.

37. Practice also shows that it is easier and more effective to integrate socio-economic criteria at a very early stage of the procurement procedure (i.e. description of the subject of the contract, technical specifications).

38. The national action plan for sustainable public procurement (which is not binding for ÖBB Infra) has been a substantial step forward; similar guidelines for sectors which are not affected by this action plan are urgently needed. Incentives like tax shelters for sustainable procurement would help a lot to overcome the obstacles described above.

39. For further information see:
http://www.oebb.at/infrastruktur/de/5_0_fuer_Generationen/5_2_Verantwortung_Umwelt/index.jsp

DIMENSION 2. UNDERSTANDING MARKET CAPACITY AND ASSESSING COSTS AND BENEFITS

40. The case study from India shows an example of using life-cycle costing in implement ting GPP. The case study from Consip, the Italian purchasing body, shows market analysis in practice.

INDIA

Context and background

41. The total volume of public procurement in India is estimated to constitute about 30% of GDP. There is no law that governs public procurement in India. The General Financial Rules (GFR) issued by the Ministry of Finance lay down the basic principles of efficiency, economy, fairness and equitability, and promotion of competition in public procurement. The current guidelines do not mandate public authorities to include environmental and social concerns in public procurement. However, awareness about the need for incorporating sustainability in decision making has been growing in recent years. The use of public procurement as a tool to influence market trends in favour of environmentally and socially responsible products and services is a relatively new concept in India. The Ministry of Railways, which administers Indian Railways, the national railroad carrier, is one of the central ministries in India. The procurement of goods, works and services in Indian Railways is governed by the GFR, codes, manuals and departmental guidelines.

42. The Indian Railways Vision 2020 document states its intention to conserve energy by achieving 15% enhanced energy efficiency and to usher in a low-carbon, energy-efficient path. Many employees working for Indian Railways reside in a railways colony. Most of these households use energy inefficient incandescent lamps (ICLs) for their lighting needs, thus increasing peak electricity demand in the evening. The introduction of energy efficient lighting solutions in these households faces many challenges, such as low consumer awareness of energy efficient products, the quality of existing products on the market, poor availability of green products in rural markets, and the most of all, high initial cost of compact fluorescent lamps (CFLs) on the Indian market.

Objectives

43. In keeping with the goal enshrined in Vision 2020, Indian Railways took a unique initiative in 2008 to reduce the peak lighting loads in Indian Railways' residential quarters by replacing ICLs with energy efficient CFLs. The project team used life-cycle costing (LCC) as a tool to demonstrate the potential benefits of using CFLs over ICLs for lighting needs even though the upfront purchase price of a CFL is approximately five or six times that of an ICL in India. The idea was to encourage the involvement of stakeholders in the project implementation phase so that they could experience the benefits of adopting greener products and services themselves. The resulting energy savings achieved through this project will reduce the total power demand and lead to a reduction of greenhouse gas (GHG) emissions.

44. The secondary objective of the project was to demonstrate the use of the Clean Development Mechanism (CDM) under the Kyoto Protocol to finance an energy efficiency project in an emerging economy. It leveraged money earned through the sale of certified emission reductions (CERs) generated during the project to distribute a maximum of 4 CFLs to 400 000 households across Indian Railways.

Table 1. Camparison of life-cycle costing for CFL and ICL

Wattage of ICL (in Watt)	100	100	60
Wattage of CFL of Equivalnet Lumen (in Watt)	20	23	14
Consumption of Electricity in burning ICL for 6000 Hrs = Wattage X Hours/ 1000 KWH	600	600	360
Consumption of Electricity in burning CFL for 6000 Hrs = Wattage X Hours/ 1000 KWH	120	138	84
Saving in Electricity over Life Cycle of CFL i.e burning for 6000 Hrs = (3-4)	480	462	276
Cost of Electricity per KWH (in INR)	5	5	5
Saving in Electricity Bill over Life Cycle of CFL = (3-4)*6	2400	2310	1380
Initial Cost of each ICL (in INR)	15	15	11
Initial Cost of CFL of equivalent lumen (in INR)	130	130	90
Initial Cost of ICL for burning 6000 Hrs (in INR)	90	90	66
Net Saving per CFL over Life Cycle (in INR) = 7-9+10	2360	2270	1356

Source: Northern Railway, New Delhi

Implementation

45. The project was conceived and administered at the ministry level and was implemented by divisional units across country. The tender conditions were designed to communicate unequivocally the requirement of high-quality CFLs as per Indian Standard IS: 15111 of reputed make with 10 000 burning hours. Further, it clearly spelt out that the prospective bidder shall recover the cost of the CFLs supplied to Indian Railways through the sale of CERs by registering it with the UNFCCC as a CDM project. A globally advertised tender was floated in June 2008. The Project Implementation Deed dated 30 October 2009 was signed between CQC Malaysia Limited and Indian Railways, allowing CQC to claim the CER rights in lieu of supplying CFLs to Indian Railways.

46. Under the agreement, M/s CQC was responsible for procuring high-quality CFLs as per the tender specification from M/s Phillips and supplying CFLs to designated points as per advice from the divisional head. M/s CQC was to recover the cost of the CFLs through trading CERs. As per the agreement, 3% of the CERs were to be transferred to Indian Railways as well. Further, M/s CQC was responsible for undertaking all of the processes involved for acquiring CDM status, from the development of the project design document, obtaining host country approval, validation and registration of the project, project monitoring, to verification and certification with the UNFCCC. The Ministry of Railways, as the project beneficiary, was responsible for the distribution of CFLs in Indian Railways' housing colonies on a replacement basis, recordkeeping, storage of the CFLs and disposal at the end of their life as well as the safekeeping of released ICLs until verification.

47. The project team identified the stakeholders as: Indian Railways employees residing in residential quarters, Philips India staff, Indian Railways employees involved in the project and local NGOs. M/s CQC conducted training for supervisory staff involved in the distribution of the CFLs. The consumers residing in households were adequately briefed on the proposed project during stakeholders meetings conducted at numerous different locations. They were also told that they need to install the CFLs in areas of maximum

usage like the kitchen, drawing rooms and common utility areas where average lighting is a minimum of 3.5 hours per day, in order to achieve the maximum benefit.

48. The project activity started on 10 July 2009 with the signing of the master purchasing agreement between M/s CQC and M/s Philips India. The distribution of 1.41 million CFLs among stakeholders across India was completed in December 2009. The project was registered with the UNFCCC as a CDM project in November 2010 after obtaining host country approval from the Ministry of Forest and Environment and validation by the UNFCCC's appointed Designated Operational Entity (DOE). Final verification of the project is underway and it is expected that the current year's CERs will be issued soon.

Impacts and monitoring

49. The project has been closely monitored since its beginning. Spot checks were conducted to verify that the CFLs were actually installed in households within two weeks of their distribution. Project co-ordinators were responsible for visiting at least 25% of the households participating in the project. M/s Det Norske Veritas (DNV) independently validated the project for meeting all of the relevant UNFCCC requirements for the CDM and all of the relevant host party criteria.

50. The project contributes to sustainable development as it brings forward an energy efficient technology which would otherwise not have such a large market penetration in India.

51. Economic benefits: The project resulted in direct energy savings of 112 500 MWh per annum and is expected to generate 486 130 units of CERs equivalent including a 3% share to Indian Railways.

52. Social benefits: More than 400 000 households (400 831) have directly benefitted from this project as they received free CFLs that will provide them with sustained savings over the years in terms of energy bills. Further, disposal or recycling of the ICLs and CFLs will require an informal/formal recycling industry, which will create additional employment and generate additional income to the recyclers.

53. Environmental benefits: Replacing ICLs with CFLs has reduced energy consumption by approximately 75 KWh per CFL per annum and thereby carbon emissions from upstream fossil fuel power generation. It resulted in a reduction of approximately 90 000 tonnes of CO_2 emissions (CER equivalent) per year. Clearly, the use of CFLs will avoid the production of glass as well as the utilisation of energy in ICL bulb production, among others.

54. In addition, one of the key benefits of this project is exemplified in the fact that India faces a chronic energy deficit. The country is straining its resources to build more fossil fuel plants to meet the ever-growing demand for electricity. The savings from this project will help improve the power supply for agricultural, domestic, industrial and commercial users in India. Most of all, the project raised awareness among more than 400 000 households about the importance of conserving energy.

Challenges and risks

55. The project had two components. First, justifying the procurement of CFLs, at a substantially higher initial cost, based on life-cycle costing instead of simply the initial economic cost. Second, financing the project using the Clean Development Mechanism (CDM) through the sale of carbon emission reductions generated during the project. The conceptualisation and development of the bid document itself was a huge task for the project team, as both of these components needed to be merged together. At the same time, the project design needed to secure the investment risk of a private player bagging the contract over a period of the project cycle.

56. Supplying CFLs free of cost to households does not guarantee that consumers will then buy CFLs in the future. That required an awareness campaign to demonstrate to stakeholders the benefits of adopting CFLs even if there is a very high initial cost. The team organised various stakeholder meetings across India to buttress the savings potential of CFLs over their lifecycle and how they can save on their monthly electricity bill by using CFLs in their households. This concept proved very useful as occupants of housing colonies could clearly visualise the benefits of adopting CFLs over ICLs. Here, the risk is if stakeholders are not fully convinced of the savings potential of CFLs, they may revert back to using ICLs after the end of the first CFL's life supplied by Indian Railways.

57. The CDM project has transaction costs and registering such a project with the UNFCCC takes 12-24 months. The process is very complex, requiring co-ordination with several agencies and stakeholders throughout the life of the project. Further, the development of the project design document, obtaining host country approval, project validation and registration, project monitoring, verification and certification with the UNFCCC requires lots of documentation and technical expertise. The team, not expert in handling a project of this complexity, carried out the project deftly by awarding the project's design and implementation to professionals through open bidding and limiting its role to regulatory compliance.

58. The project was originally planned to distribute 2.6 million CFLs to Indian Railways households; however, during the actual distribution of the CFLs, many houses were found vacant, locked and abandoned. As a consequence, only 1.41 million CFLs could be distributed compared to the 2.6 million CFLs originally planned for. This did not affect the economic viability of the project, but substantial variation between a projected quantity and actual quantity could affect the economic viability of such a project.

59. The project was financed from the sale of CERs in the international carbon market, which fluctuates. This project was a success, as in 2010 the CER market was on the upswing and M/s CQC was able to sell the CERs earned during this project to the Swedish Energy Agency at a good price. With the deepening recession in Europe, which has led to the crash of the international carbon trading market, such projects are at a heightened risk.

Key lessons learnt

60. Sustainable public procurement (SPP) is a demand side policy intervention to reduce the consumption of resources. The consumer is central to any discussion on SPP. Therefore, the implementation of SPP, in practice, requires not only laws and guidelines but also a change in consumers' attitude towards the sustainable consumption of products and services. This project has largely been successful because consumers understood the benefits of using CFL and adopted the project wholeheartedly.

61. This case shows how government can change consumers' consumption behaviour and help shift their choice for greener products and services. This requires spreading knowledge and information about the benefits of green products and services, and therefore, involving stakeholders is a key to the success of any SPP policy.

62. Life-cycle costing (LCC) is an important tool for demonstrating the benefits of green products and services. However, this is not an easy concept and procurement professionals are not very experienced with it. Therefore, developing technical expertise to handle such a concept is crucial for the successful implementation of such a project.

63. The project was conceptualised and designed at apex level but was implemented through decentralised networks of offices across India. This exemplifies the importance of institutional structures in implementing such a project in the field.

ITALY

Context

64. Consip is the Italian central purchasing body, 100% owned by the Ministry of Economy and Finance (MEF). Energy is one of the product/service categories that Consip provides to public administrations. Through research, Consip's energy and R&D units realised that there is need for action in the procurement of heating services as it absorbs 41% (about EUR 3.4 billion annually) of the national energy expenditure and accounts for approximately 5% of the Italian energy market. The expected target was to achieve economical savings of 5-10% and an equivalent energy savings.

Objectives

65. In order to combine cost savings and incentives for innovation in public procurement (performance standards), Consip launched a framework contract on "Integrated Energy Management Services" (heating services including improved energy efficiency, consumption reduction and CO_2 emissions avoidance). Pre-procurement market consultation was carried out using online questionnaires addressed to businesses and the main trade associations in Italy. This initiative is a good example of how research, development and innovation can be stimulated through a performance-based contract for a large number of administrations.

Implementation

66. Consip undertook a market analysis based on a mix of historical data, precious information deriving from the answers provided by the suppliers to specific questionnaires published on Consip's website, and on the announcements to all potentially interested suppliers of the company's schedule and scope of the forthcoming procurement initiatives. In this way, suppliers were offered the opportunity to take part in some steps of the process, which took two years.

67. The pre procurement consultation process was one of the most important parts of the framework contract construction. Pre-procurement market consultation was carried out using online questionnaires that had the goal of obtaining information from the suppliers. Several meetings took place with the main trade associations and with all the suppliers that won the previous edition of the framework contract, to discuss about the critical aspects emerged during the execution of the previous tender. In this way, suppliers were involved before the definition of a significant part of the tender strategy. This process usually starts at the beginning of the feasibility study and finishes just before the publication of the tender.

68. Consip's tender was a framework contract open to all public administrations so it wasn't possible to define exactly the buildings and their technical/physical features. So, the tendering process was developed starting from a business case on a specific public building expanded to the entire value of the tender (including all the buildings forecasted in the tender).

Impact and monitoring

69. The tendering process was an open procedure, split into 12 geographical lots, awarded to 5 different suppliers, on the basis of the most economical advantageous tender (MEAT), whereby 70% was allocated to price and 30% to quality.

70. The main feature of this performance contract was a settled temperature (i.e. 20°C) to be preserved inside buildings (public offices, schools, prisons, universities, etc.) for five years.

The main services included in the contract were:

- Fuel supply.
- Operation and maintenance (O&M) of the heating facilities.
- Remote control.
- Outsourced legal responsibilities.
- Outsourced technical and administrative issues.
- Regulatory and technological upgrading.
- Improvement of energy efficiency consumption and consequently pollution reduction: the supplier was required to ensure a minimum level of reduction for primary energy consumption of the whole "building/heating plant" system, measured in tonnes of oil equivalent (TOE). The supplier was also required to provide evidence of the results obtained; credibility was certified by the AEEG (Italian Regulatory Authority for Electricity and Gas) which operates and maintains heating facilities, including by remote control.

Challenges and risks

71. In order to reduce energy consumption, at a national level, Consip adopted a strategy based on energy performance contracts. The basic idea is that the supplier of the energy service is motivated and encouraged to optimise energy consumption and resource management to improve his/her profitability.

72. Green considerations were introduced (benchmarked against international best practice) in the following elements of the tender:

- Technical specifications:
  - settled temperature (e.g. 20°C) to be preserved inside buildings (public offices, schools, prisons, universities, etc.) during the average Italian heating season (i.e. 8 hours for 4 months)
  - installation of electronic meters and constant monitoring of the buildings' indoor temperatures
  - online monitoring activities (using eMeters) and online assistance
  - assessment of the optimal level of consumption for heating and energy services
  - energy audit performed for every building.

73. The supplier is compensated only at the end of the service delivery, having achieved the predetermined levels of performance.

- Award criteria:

- technical report (for each building receiving the energy services) including a specific study on the interaction between building users and its energy system

- publication of the environmental assessment and/or social budget and/or sustainability report

- infrared photography report for each building receiving the energy services.

74. The award criteria were aimed at encouraging suppliers to reduce primary energy consumption and the associated CO_2 emissions of the entire building/heating plant system by measures such as substitution of hot-water heating, insulation, renewable thermal sources, etc. All the suppliers involved were able to comply with the technical criteria requested.

75. A 27% cost savings for public administrations was achieved involving approximately 6 000 buildings. Contracts executed had a total (estimated) financial value of EUR 800 million. There was an enhanced competition on technical features included in the tender.

Key lessons learnt

76. The principle environmental impacts are related to CO_2 emissions caused by energy consumption. In order to reduce these impacts, the contract included a performance clause requiring a minimum amount of energy saved (375 TOE). Actual energy saved (13 800 TOE) was higher, resulting in the avoidance of 40 800 tonnes of CO_2 emissions. The procurement process ensured two additional results:

- In the short term, suppliers are encouraged to reduce the energy consumption of buildings.

- In the long term, at the end of the contract, the public administration owns the equipment installed by the suppliers (for example, the boiler).

77. If all Italian public authorities used Consip's framework contracts, the cumulative effect would be around EUR 100 million of savings.

78. The success of this framework contract has helped Italian public authorities to play an exemplary role in energy savings *vis-à-vis* citizens and the private sector while complying with Directive 2006/32/EC on energy end-use efficiency and energy services as well as their procurement obligations.

79. In the new edition of this framework contract, energy savings will be monitored both by Consip and the public administrations who occupy the buildings, with potentially applicable penalties. The main changes expected are:

- the remuneration of the suppliers, which will take into account both the physical and architectural features of the buildings (for example, type of windows, insulation)

- the variable duration of contracts, in order to increase the pay-back period for the supplier (from five to seven years)

- an increase in the minimum level of reductions requested (in TOE)

- the multiple services offered by the supplier (for example, energy certification).

DIMENSION 3. INTRODUCING ENVIRONMENTAL STANDARDS IN PROCUREMENT

80. The case study from China shows the development of lists of environment-friendly products, their on-line dissemination and how these lists are followed by Chinese agencies. The case study from Estonia shows the value of award criteria that can lead to objective and justifiable GPP decisions. The Netherlands case study looks at the Rijkswaterstaat approach to Green Public Procurement for Infrastructure. The Austrian case study looks at "creative" road maintenance and reconstruction. The Danish case study looks at procurement of a function rather than a product to facilitate innovative solutions.

People's Republic of CHINA

Context

81. On 24 October 2006, the Ministry of Finance (MOF) and the former State Environmental Protection Administration (now the Ministry of Environmental Protection – MEP), jointly issued the Recommendations on the Implementation of Environmental Labelling Products in Government Procurement and the first government procurement "List for Environmental Labelling Products" which included 14 categories of products. This action demonstrated that the Chinese government took environmental standards into consideration in its procurement process. The two above-mentioned documents define ranges of government procurement, the product categories, operation process and specific regulations which provide important policy support to carrying out government procurement on Environmental Labelling Products, and represents the launch of the Chinese Governmental Green Procurement (GGP).

82. The government procurement "List for Environmental Labelling Products" is jointly managed by the MOF and the MEP. All of the products on this list have been granted the environmental labelling certified by authoritative certification bodies, while taking other factors into consideration, such as environmental performance, technology levels and the market. The "List for Environmental Labelling Products" is published through certain channels, in particular in: the Ministry of Finance (MOF) at www.mof.gov.cn, Ministry of Environmental Protection （MEP) at http://www.mep.gov.cn, Centre of China Government Procurement at http://www.ccgp.gov.cn and China Green Procurement Net at http://www.cgpn.org. Lists can be downloaded by the public and any purchasing entities.

83. Chinese GGP documents require all levels of state organisms, institutions and organisations to give priority to purchasing Environmental Labelling products when they purchase goods and prohibits them from purchasing any products which harm the environment or human health. Products which are on this list with similar performance, technology and service, but with less environmental impact should be preferred to more traditional products. If a purchasing agency does not meet the above requirement, this will be made public by responsible departments in accordance with relevant laws, rules and regulations, while the financial sectors can refuse to pay. This requirement came into effect on 1 January 2007 in the budget departments at the central and provincial level, then implemented across other levels of government.

Objectives

- actively promote the construction of an environmentally friendly society through environmental labelling products in government procurement
- implement a green policy for government procurement to improve environmental quality.

Implementation

84. During the seven years following the implementation of the Chinese GPP programme, 11 government procurement "Lists for Environmental Labelling Products" have been issued. Product categories have increased from 14 to 66; the number of participating companies has grown from 81 to 426; and the number of models of products has increased from 800 to 37 953.

85. Examples of the list's product categories include: computer equipment and software, printers, display devices, duplicators, multifunction printers (MFP), passenger cars (sedans), buses, household appliances, faxes and digital communications equipment, television equipment, furniture, copy paper (including recycled copy paper), cartridges (including renewable cartridges), wood-based panels, secondary processing materials, sheets, cement concrete products, fibre-reinforced cement products, lightweight construction materials and products, building ceramics, building waterproofing roll material and products, heat insulation, man-made mineral material and products, functional architectural coatings, wall coating, waterproof coating, other architectural coatings, doors, windows, coating (excluding architectural coatings), sealing fillers, plastic products.

Impact and monitoring

86. The financial budgets and expenditure on GPP have been increasing annually. Statistics from the MOF show that in 2009, expenditure on government procurement of products with Environmental Labelling reached RMB 14.49 billion, which accounted for 74% of products purchased by the government through a competitive procedure. Updated statistic indicated that in 2011, government expenditure on products with Environmental Labelling reached RMB 73.98 billion, or 60% of goods purchased by the government through a competitive procedure. Public procurement of goods with the Energy Efficiency Labelling reached RMB 91.06 billion, accounting for 82% of products purchased by government through open competition.

87. Those central and local purchasing agencies with purchasers that have more environmental awareness usually do better green public procurement than the other purchasing agencies, which are willing to spend a lot of money on Environmental Labelling products.

88. China does not have a full-fledged monitoring system.

Challenges and risks

89. Although the Chinese government gives green procurement significant importance, its implementation still lacks specific regulations to directly support it. There are certain legal bases such as the Government Procurement Law of the People's Republic of China, the Cleaner Production Promotion Law of the People's Republic of China and the Circular Economy Promotion Law of the People's Republic of China as well as relevant policies such as the Decision on Implementing the Scientific Concept of Development and Stepping up Environmental Protection, Several Opinions of the State Council on Speeding up the Development of Circular Economy, Notice of the State Council on Printing and Distributing the Comprehensive Work Scheme of Energy Conservation and Reducing the Discharge of

Pollutants, Decision on Speeding up the Cultivation and Development of Strategic Emerging Industries which have existed for a few years. They all advocate the consumption concept for resource conservation and environmental protection, encourage purchasing and using products with Environmental Labelling and the Energy Efficiency Labelling, products with water conservation certification, and products with green food. However, they have not been effective enough to promote the implementation of China's GPP. China's GPP is still lacking powerful legal bases such as specific legislation to consolidate and develop green public procurement.

90. It is necessary to improve the environmental awareness of procurement agencies and purchasers, as evidence shows that purchasing agencies with more environmental awareness usually carry out better GPP than the other purchasing agencies. In fact,

91. Second, the lack of monitoring and evaluation mechanisms greatly hinders the sustainability and effectiveness of GPP.

92. Finally, the main obstacles to building up the monitoring and evaluation mechanisms for GPP are the current government procurement management system and the difficulty of accessing purchasing data caused by the decentralised management of GPP.

93. As the world's largest developing country, the Chinese government's financial expenses increase every year, which plays a leveraging role for the environment, resources and economic development. Therefore, it is significant for China to implement GPP. As an innovation in environmental protection, the implementation of GPP plays an important role in building a resource-conserving and environmentally friendly society that is passionately advocated by enterprises producing green goods. GPP was first written into China 12th Five-year Plan on National Economic and Social Development, the framework document for the medium- and long-term planning of China's economic and social development. This will further promote the development of the Chinese government's green procurement

Key lessons learnt

- Environmental labelling is an effective tool for carrying out GPP.
- Relevant laws and regulations provide basic support for GPP.
- The establishment, implementation and monitoring of a relevant system will support and ensure the development of GPP.
- The product list is an effective tool for implementing GPP.
- Environmental awareness raising of purchasers is one of the driving forces for the development of GPP.

THE ESTONIAN ROAD ADMINISTRATION[3]

Procurement objectives

94. This particular procurement process was carried out in October 2010 under the Green Investment Scheme ("Promoting the Use of Public Transport"), which is funded from the agreement of the sale and purchase of the CO2 emissions quota between Estonia and Spain. The agreement was awarded in accordance with Kyoto protocol Article 17 and provided that the Estonian government shall invest the proceeds arising from the sale of the CO2 quota into areas where CO2 emission reductions can be achieved. The aim was to introduce new environmentally friendly buses which will help to popularise the use of public transport and reduce CO2 emissions caused by the transport sector.

Background

95. The Estonian Road Administration (ERM) is a government agency operating in the administrative area of the Ministry of Economic Affairs and Communications. It is responsible for the implementation of transport policy, that is, infrastructure, traffic and public transport.

Criteria used

96. In terms of "green" criteria, the tender specifications included the following:

Subject of the contract

97. The purpose of the public procurement is to buy new cost-effective and environmentally friendly buses, suitable for running county and regular urban services (category M3 vehicles).

Award criteria

98. The award criteria were weighted as follows: 55% value of tender (i.e. lowest price); 24% for a combination of warranty, bus engine smoke opacity and repair and maintenance work; and 21% for other technical properties of the buses, including:

- Points are awarded if the engines of the offered buses comply with the emission limits applicable to EURO V enhanced environmentally friendly vehicles (EEV) as specified in Directive 2005/55/EC. The tenderer shall prove compliance with this requirement by submitting an engine type-approval certificate according to Directive 2005/55/EC.

- Points are awarded if the tender is accompanied by a confirmation from the manufacturer of the engines of the offered buses specifying that the engine may be used without modification with diesel fuel, complying with the standard EVS-EN 590:2009+NA:2009 (the Estonian equivalent of the corresponding European standard). Diesel fuel may contain up to 7% of fatty acid methyl esters (FAME) described in standard EN 14214.

- Points are awarded if urban buses are equipped with dual-zone (driver's cab and passenger compartment) air conditioning equipment which enables automated regulation of interior temperature.

3. Case study initially researched by ICLEI.

99. In order to avoid unequal treatment of tenderers and minimise the risk of disputes, the contracting authority decided not to include criteria on fuel consumption and CO2 emissions of the offered buses. This was because for category M3 vehicles there has not been a compulsory testing procedure established to measure fuel consumption and CO2 emissions that the contracting authority could rely on. Evaluating such criteria based on testing results provided by the tenderers or the manufacturers of buses would not have provided an adequate overview of the differences in fuel consumption and CO2 emissions between the different buses offered. This deficiency is likely to have resulted in unequal treatment of tenderers and led to unnecessary disputes.

Results

100. All the bids received offered vehicles with engines that met the EEV emissions standard – which is more stringent than the legally required EURO V, despite this being the preferred standard (i.e. award criteria). This means that the tendering criteria used motivated tenderers to offer more greener vehicles than required. Most tenders also offered technical enhancements, for which additional evaluation points were awarded.

101. In the tendering procedure, 28 persons registered as interested parties and 6 tenders were submitted. The tender was awarded to a Czech company and had a value of EUR 15.7 million (excluding VAT) for the delivery of 110 new buses with long warranty periods (5 years).

Environmental impacts

102. Although the procurer took notice of the environmental aspects of the buses, it was more important to popularise public transport as a more environmentally friendly choice of transport. The main purpose of this action was to limit the growth in the number of car owners and to attract more passengers by offering them more comfortable and modern public transport services.

103. According to the contract between Estonia and Spain, the ERM is obliged to monitor the efficiency factor of the project until 2018. The efficiency factor is measured in tonnes of CO2 emissions prevented because of the project. The methodology used to calculate the efficiency factor takes into consideration the amount of fuel that has been consumed by the new buses compared to the amount consumed by the old buses. Consideration is also given to the change in the number of public transport users and is based on the assumption that a certain proportion of new passengers have shifted to public transport, thus stopped using their personal vehicles. The estimated total amount of CO2 emissions saved has been calculated at 912 tonnes.

Lessons learnt

104. The most significant problem which emerged during the course of the procurement process arose from the fact that evaluating the tenders based on the fuel consumption and CO2 emissions of the buses proved to be impossible. The Clean Vehicles Directive (2009/33/EC) states that contracting authorities should take into account the lifetime energy and environmental values of the vehicles and also defines a corresponding accounting methodology. The directive also stipulates that evaluation of fuel consumption and CO2 emissions shall be based on a standardised test defined in Community type approval legislation (CTAL). For vehicles not covered by standardised Community test procedures, comparability between different offers is ensured by using widely recognised test procedures, the results of tests for the authority or information supplied by the manufacturer.

105. At the time of the procurement process there had not been any established standardised test procedures under CTAL to evaluate the fuel consumption and CO2 emissions of category M3 whole vehicles (buses). Also, there were no widely recognised test procedures which could be used for the

evaluation of tenders. Conducting appropriate tests by the contracting authority was not feasible and relying on data provided by the tenders of bus manufacturers would have been associated with the risk of unequal treatment of tenderers and lack of transparency in evaluating tenders. Therefore, the contracting authority was unable to evaluate these environmental criteria which were highly relevant to the objective of the action.

106. In the interest of effective and transparent green public procurement processes involving the purchase of vehicles, it is essential to complement the CTAL and establish mandatory test procedures for fuel consumption and CO2 emissions measurements for all vehicle categories.

NETHERLANDS

Context and background

107. In 2010, the Dutch House of Commons ruled that the Netherlands public authorities must implement 100% sustainable procurement as of 2015. In response to this, Rijkswaterstaat (the Dept. of Public Works of the Ministry of Infrastructure and the Environment) developed a methodology for infrastructure projects whereby the functional specification of the tender together with the quality input from the client ensure an innovative and high-quality solution.

Objectives

108. Rijkswaterstaat (RWS) strives to commission procurement projects as far as possible based on functional, performance based specifications of the required infrastructure so that the market has the optimum freedom to arrive at effective, alternative and innovative solutions. The tenderer is also asked to respond to specific quality criteria, which play an important role in tendering according to the Most Economically Advantageous Tender methodology.

109. The 'Most Economically Advantageous Tender (MEAT)' procedure means that RWS selects tenders on the basis of a combination of price and quality. Quality includes for instance:

- public oriented approach ('less hindrance')
- sustainability
- project management
- design
- risk management

110. To assess tender submissions, RWS ensures that quality aspects can be monetised. To this end, RWS assigns a value to specific quality aspects and the way in which these quality attributes are assessed at the invitation to tender (ITT) stage. Tenderers can calculate precisely how much the quality value they have submitted is worth. The more effort the bidder makes to improve the quality of the bid, the higher the monetised value that will be deducted from his actual offer price. The tenderer with the lowest total 'price' wins the tender. The financial cost to the contracting authority is still the same of course, but by monetising efforts made to improve quality in this way and deducting them from the quoted prices as part of the assessment, tenderers with the best quality offers have a higher chance of winning the tender.

111. By using the methodology of performance-based tendering and MEAT, the market can work in a targeted way towards better quality, more innovative solutions with greater value. This tendering methodology thus helps to stimulate and utilise the market's innovative and creative capacities more efficiently.

Implementation

112. During procurement based on the MEAT, RWS very carefully draws up the criteria for the assessment of the quality aspects for the specific project and explains them in a 'tendering and assessment' document or a background document. This includes the objectives of RWS, the criteria on which the quality aspects are assessed and the maximum value (expressed as a maximum price) it assigns to these criteria.

113. Procurement using MEAT follows three steps:

1. Establishing the quality aspects, drawing up criteria based on the opportunities and risks of the project, and establishing the maximum MEAT amount.

2. Actual tendering, by drawing up documents, assessing submissions and communicating the results to the tenderers.

3. Monitoring during the execution phase of the MEAT added quality value provided.

114. The MEAT criteria with which RWS assesses the quality of submissions, and that are drawn up for each tender, must meet a number of requirements. The criteria must:

- provide added value to the client
- create competition between tenderers
- be easy to understand for tenderers
- show differences in quality
- make clear whether and how added value is assessed

Sustainability

115. RWS has decided to focus on two criteria when assessing the sustainability attributes of offers, work processes and associated products: CO2 emissions and environmental impact. Two instruments have been developed for these two aspects: the CO2 performance ladder and 'DuboCalc' respectively.

116. The CO2 performance ladder is a certification system with which a tenderer can show the measures (to be) taken to limit CO2 emissions within the company and in projects, as well as elsewhere in the supply chain. DuboCalc is an LCA-based tool which calculates the sustainability value of a specific design based on the materials to be used. Bidders use DuboCalc to compare different design options for their submissions. The DuboCalc score of the preferred design is submitted with the tender price.

117. To ensure sustainable procurement, RWS carries out tendering procedures as follows:

- For maintenance contracts, energy consumption is included where possible as part of the submission price, in order to create a direct stimulus for energy efficiency. For the same reason,

Design, Build, Maintain and Finance contracts also include energy consumption as part of the submission price.

- In some work contracts, specific technical solutions for energy saving and sustainability are obligatory. For instance, in tunnels LED lighting is always required. Another example is that only sustainable timber is allowed.

- A tenderer can submit a "CO2 performance ladder" certificate with their tender submission. The certificate obliges the tenderer to comply with a certain CO2 reduction target according to their method of execution and working processes. Holders of the certificate have their submission price reduced by a value proportional to the effort made to reduce CO2 emissions. The certificate of the CO2 performance ladder can be provided as evidence at the tender submission stage, but this is not essential as long as the certificate is provided within one year of signing the contract.

- The bidder is encouraged to offer innovative and sustainable design options and gets the opportunity because RWS issues performance rather than conformance specifications. Sustainability is further enhanced by using the MEAT tendering procedure in which DuboCalc is used as an assessment tool.

CO2 performance ladder

118. Contractors can apply for a 'CO2 performance ladder' certificate. In order to comply, contractors need to take steps towards reducing their Carbon Footprint. The first step (or 'rung' on the ladder) is to measure the company's CO2 emissions. In further steps CO2 emissions of their supply chain is also measured, and more importantly: goals are set towards reducing emissions. The higher levels on the CO2 ladder include steps towards CO2 reduction in the supply chain.

119. The CO2 performance ladder is used in the tendering procedure as follows: the bidder indicates at which of the five rungs (ambition levels) of the CO2 performance ladder he intends to carry out the work; the higher the effort to reduce CO2 emissions, the higher the rung. A commitment to a higher rung results in a greater deduction from the submission price, which increases the chance of winning the contract. Each CO2 ambition level corresponds to a different percentage reduction of the submission price. The final amount assessed by RWS resulting from using the CO2 performance ladder is a deduction of 1% per rung of the submission price. The highest level is rung 5, so the maximum deduction is 5%.

DuboCalc

120. To quantify the sustainability of material use, RWS has developed a software tool that calculates the environmental impact of the material. This calculation is based on a life cycle analysis (LCA) of the material. The software is called the Sustainable Building Calculator, or "DuboCalc".

121. With DuboCalc all embedded environmental impacts of material use can be calculated, from raw material extraction and production up to and including demolition and recycling (so the entire life cycle). DuboCalc also calculates the energy consumed by infrastructure works during the use phase.

122. For a DuboCalc calculation of infrastructure works, the program requires input of the amounts of materials used for a particular design. Using LCA data from an in-built database it then calculates 11 environmental impact parameters. The software is based on an independent (national) dataset containing certified LCA information for each material.

123. DuboCalc then calculates the value of these effects via the so-called 'shadow price method' to arrive at a single figure, the Environmental Cost Indicator value (ECI value). The shadow price method is based on the costs of preventing emissions from arising. The ECI value indicates the environmental impact of a particular design for civil engineering works. A lower value indicates a lower environmental impact. Designs that differ significantly from each other in terms of material use also differ in terms of environmental quality. DuboCalc enables designers to calculate ECI values of alternative designs to arrive at an optimally sustainable design.

124. The ECI value is used in the tendering procedure as follows: the contracting authority provides the tenderer with all the functional requirements and the latest version of the program DuboCalc. The tenderer designs the infrastructure, and calculates the price and the ECI value. The ECI value is transformed into a monetary value according to a formula that is prescribed by the tenderer (the ECI value and monetary value are inversely related and there is a minimum and a maximum).

125. These two prices are offered to the contracting authority. The contracting authority selects the tenderer with the lowest price and ECI value combined to undertake the work. This procedure ensures that tenderers do their utmost to make an inexpensive and environmental friendly design.

Sensitivity analysis

126. If tenderers have little or no design freedom, and the tenders are virtually indistinguishable from each other in terms of sustainability and environmental quality, then there is little point in using the MEAT methodology. Therefore, before including environmental quality as a distinguishing factor in the tender process, RWS initially always investigates whether sustainability or environmental quality will be sufficiently distinctive when proposals are submitted.

Impact and monitoring

127. RWS is putting a great deal of effort into embedding sustainability into procurement procedures. To ensure that the procedure is effective, the calculated environmental quality of a tender must have enough impact on the final (virtual) price to make a difference. As a consequence the percentage of award criteria reserved for environmental quality (calculated with DuboCalc) has to be large enough compared to other criteria, and the total value of all quality (compared to price) criteria has to be substantial. In practice the maximum environmental value added is often 10 to 20% of the awarded tender.

128. The level of CO2 emissions is one of the (in total 11) parameters of the LCA calculation that contributes to the ECI value. This value is the amount of CO2 emitted as a result of the use of building materials (production, transport, etc). The potential reduction of CO2 emissions can easily be calculated by subtracting the ECI value of the proposed design from the reference design. This is directly proportional to the reduction in energy use.

Realisation

129. When the contract is awarded, the offered level of ambition of the CO2 performance ladder is part of the contract and should be implemented as part of the execution of the project. The energy saving targets and measures belonging to that level of ambition are chosen by the tenderer. This is also the case for the ECI value of the infrastructural works to be carried out.

Enforcement of terms and conditions

130. The contractor must demonstrate that the proposed environmental quality value, the ECI value, is achieved in the execution of the contract. When the actual quality does not comply with the offer then a

sanction follows that is one and a half times the calculated price for quality value E.g. if the contractor was awarded a conceptual 5 million euro reduction on its quoted price for its proposed environmental efforts as part of the bid assessment, then it failed to make these efforts – the sanction would mean that the contracting authority would have to pay the contractor 7.5 million euro less than the submitted quote price.

131. Also, if after an agreed time the rung of the CO2 performance ladder is not achieved, a sanction follows that is one and a half times the advantage granted at submission.

132. More information about the CO2 performance ladder can be found on the website of SKAO: www.skao.nl (click Site in English).

The DuboCalc methodology is explained in two YouTube videos found here:

http://www.youtube.com/watch?v=cAaL4FfBQNc and

http://www.youtube.com/watch?v=LJY9QzxlW2w

AUSTRIA

Context

133. In the beginning of 2010 the Austrian road financing agency (ASFINAG), the Austrian Touring Club and the Technical University of Vienna established a working group to find ways to encourage construction firms in the area of road reconstruction (while maintaining traffic) to be creative and think about alternatives, when they participate in open procurement procedures. Starting points were the necessity to shorten construction periods, enhance the safety of drivers and reduce the impact on the environment and the assumption that bidders have a stronger motivation to submit alternative offers in the tendering phase of a procurement procedure, if they get at least a partial remuneration for preparing serious alternative offers.

134. The project is embedded in the compliance management system of ASFINAG.

Objectives

135. The essential tasks of the working group were the development of recommendations concerning the choice of procedure and the creation of a framework for general and concrete measures to achieve:

- The establishment of an incentive system for submitting alternative offers, which guarantees bidders the (partial) remuneration for economically sound alternative offers, even when they are not awarded the contract;

- The development of additional award criteria for the reduction of the construction period, the availability of road sections, the safety for road users and the impact on the environment;

- The establishment of an additional phase for optimizing the project between the award of the contract and the actual execution of the works;

- The development of a bonus system for construction firms, which optimize the design/planning of the project, in order to transfer a share of the economic benefits that are caused by the ideas of the respective firms;

- Based on these conditions, to establish practical measures to promote the creativity of bidders for the reconstruction of the "Kaisermühlen" tunnel in Vienna.

Implementation Process

136. Between February and December 2011 the working group developed a four pillar model to cope with the defined tasks in practice. The project covers app. 80 million euro p.a. Since the beginning of 2012 a project team (1,5 FTE) formed by experts from different departments of the company (e.g. engineering and procurement management) is currently working on the first pilot project (a tunnel reconstruction on a city highway).

137. The first pillar is an incentive system based on the assumption that bidders are more willing to develop alternatives during the competition phase, if the additional calculation costs are decreased: the calculation costs of the two cheapest suitable alternative offers (one per bidder), which required additional elaborations are remunerated according to a model calculation scheme. The model calculation also allows an exceptional remuneration (with a cap amount) of especially innovative alternative offers.

138. The second pillar concerns the establishment of new award criteria, which display the availability of traffic zones, the safety of road users and the impact on the close environment. The criteria are based on the assumption that the combination of the targets of the contracting authority (satisfaction of the clients, quality, economically sound results) with those of the clients (availability and safety) and those of the bidders (rentability and safety of employees) should optimally contribute to achieving the criteria. The weighting of the criteria follows a model calculation scheme (matrix) and a recommendation to integrate different stakeholder representatives (from public authorities, traffic associations and business associations) into the bid evaluation board.

139. The bonus system for design optimizing is the third pillar and aims at improving the economic efficiency of the design/planning of the project during the preparation of the execution phase or the construction phase under the condition that the quality is equal to the originally awarded contract. The system is based on the hypothesis that, if economic efficiency is a common target of the contracting authority and the contractor, the readiness to achieve additional economic improvements is higher and changes the focus of construction firms in this direction instead of claiming.

140. The contractor is therefore obliged to technically optimize the execution of the works while respecting the economic interest of the contracting authority. On the other hand the contracting authority has to transfer 50% of the savings achieved through the optimized planning in comparison to the original offer.

141. Value engineering (additional project improvement phase) constitutes the forth pillar. Whereas the third pillar focuses on fine tuning the design and planning of a project, the additional project improvement phase aims at optimizing the planning of working routines and methods on the construction site, including scaffoldings, transport of construction materials, etc., while keeping the quality and agreed volume of work. There is no remuneration scheme foreseen for this phase, it serves to benefit from the time between the award of the contract and the actual start of the construction works.

Impact and Monitoring

142. So far, there are no figures or preliminary experiences available, because the first project (A 23 highway Inzersdorf) according to this new model has only just entered into the planning phase.

Challenges and risks

143. Introducing new aspects into procurement procedures usually creates initial acceptance problems with the concerned businesses. It is therefore important to present the benefits of the new model to construction businesses to incite the submission of innovative alternative offers. As past figures show, notably procurement procedures, where alternative offers are admissible, bear a higher risk to lead to an appeal, because it is difficult to define minimum requirements for the comparability with the official tender.

144. Another aspect is the difficulty to achieve economic optimisation (value engineering) by accepting alternative offers while the technical equivalence of the suggested alternative solutions with the originally required level of quality must be guaranteed.

Key Lessons Learned

145. Economic necessities and unsatisfying experiences in practice (construction firms are reluctant to submit alternative offers in open procurement procedures) create the need to find innovative solutions, which require active participation of the concerned businesses and stakeholders. If the project succeeds one main benefit will be the inclusion of concerned persons as active participants in reconstruction projects.

146. However, it is important to respect the legal constraints and the principles of transparency and non-discrimination. The current project is therefore carried out within the compliance management system, which requires close cooperation with all responsible departments.

DENMARK

Context

147. Procurement of a function rather than a product facilitates more innovative solutions than with traditional tenders. Previously, Hedensted Municipality cooled the servers using regular ventilation, but after purchasing Cronborg's RECOOL technology, the Municipality can now reuse the heat generated by the servers. DKK 73,000 year in cooling and heating expenses, and the environment is annually relieved of 28 tonnes of CO_2.

148. Cronborg has developed a new product based on existing technologies. Their heat pump system RECOOL, can collect excess heat from a server (for example) and reuse it for space heating and domestic hot water through the existing heating system of a building. The system is both environmentally friendly and economically viable.

149. "The customer's heating costs are reduced when the excess heat is recycled and less CO2 is emitted from the use of other sources of heat and refrigeration. Moreover, the heat pump solution is based on natural refrigerants that do not pollute the environment", says Hanne Kronborg, co-founder and director of Cronborg. She explains that RECOOL takes the heat into the heating system, regardless of the temperature in the system, and how the heat is generated. Thus, RECOOL offers great flexibility in both installation and use.

Objectives

150. When Cronborg promotes its solution to public procurers, the economic and environmental aspects are of great importance. Municipalities seek to buy green and energy efficient.

151. "Green procurement is of great importance to us. It creates demand for our products. We match the municipal energy policies, and we solve a task in a resource-efficient manner. The public institutions are willing to invest in solutions that save CO_2 and turn expenses into an income", says Kronborg. So far, 10 municipalities have invested in solutions from Cronborg, of which seven are "Climate Municipalities".

152. Hedensted Municipality was aware that it was a waste of resources to send excess heat from the City Hall servers through the ventilation system. This made it an easier task for Cronborg to assure the municipality of the profitable and environmental advantages of buying and installing a RECOOL solution.

Impact and monitoring

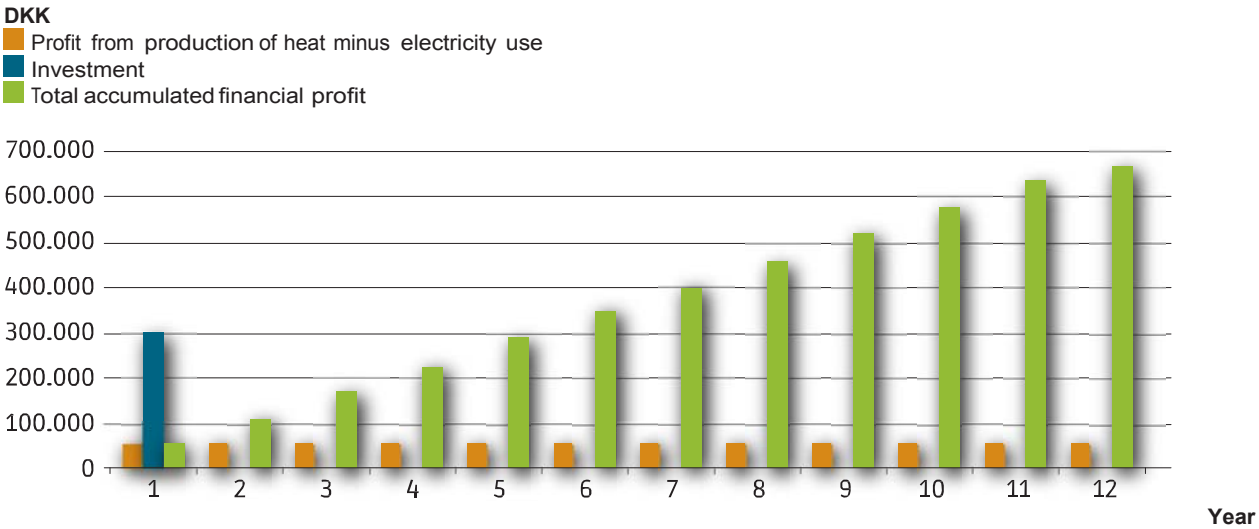
153. "An interesting project was presented to us. There was a prospect of a financial saving and an opportunity to improve the municipality's climate account. It was important that we could save CO2", says engineer Niels Abildsten from Department of Construction in Hedensted Municipality. The specific system in Hedensted has an annual operational cost of DKK 32,000 in electricity consumption. In turn, the municipality saves approximately DKK 105.000 on the heating bill, creating an annual operating profit of around DKK 73,000. With a purchasing and assembly price of DKK 400,000, the system has a payback period of approximately 5.5 years.

154. Roughly 700 kWh is generated from the servers every day. This corresponds to the daily electricity consumption of 24 households, and it provides the City Hall with 50 per- cent of its heating need during the winter months. When the outdoor temperature increases, the system provides up to 75 percent of the City Hall's heating. Overall, Hedensted Municipality saves approximately 10,000 liters of oil a year. This corresponds to an annual saving of 28 tonnes of CO_2. The income from heat recycling is greater than the cost of the total electricity consumption of the system.

Challenges and risks

155. Cronborg is offering a new, innovative solution to an existing problem; a solution that can save money for the customers and reduce both CO2 emissions and resource consumption. Nonetheless, the company cannot comply with the usual tender criteria.

The income from heat recycling is greater than the cost of the total electricity consumption of the system.



156. “Typically, the procurement officers describe the traditional cooling systems in the tender documents, and then RECOOL is not eligible”, explains Hanne Cronborg, adding: “As long as traditional procedures prevail where the system specifications must match the tender descriptions of free cooling, we cannot be considered”.

157. Cronborg would have better chances of expanding their market if municipalities and the State based procurement specifications on the function, performance and result rather than specific product details. It would pro- vide the suppliers the possibility of contributing with new and innovative solutions based on knowledge of the market.

158. Another barrier for sale to the public is that RECOOL is not included in the ESCO solutions; i.e. solutions where the owner of the building collaborates with a private energy provider, who plans and implements energy optimizing renovations in the buildings. The investments are financed through the energy savings achieved. The ESCO consultants are not familiar with RECOOL and therefore this solutions is not included in their recommendations.

159. “The municipalities would experience greater savings if the RECOOL solution was offered through the ESCO tenders”, says Hanne Kronborg.

160. “We have been contacting the ESCO providers to let them know that some municipalities would like to have the RECOOL solution included in the ESCO collaboration catalogue. The municipalities can demand that a RECOOL-based solution is included in the catalogue, but for this to happen they need to know about the solution. It takes a lot of resources for us to inform every single procurer”, says Hanne Kronborg.

Key lessons

161. Cronborg has improved the working environment through less noise. Through the purchase of RECOOL, Hedensted Municipality did not only reduce the climate impact, also the working environment improved. The former cooling system was placed outside the office windows and was a disturbance to the employees. RECOOL has 0 decibel in noise, which has improved the wellbeing of the employees, who are relieved of the constant humming of the air conditioner.

162. Both Cronborg and subcontrac- tors are expanding. Cronborg is doubling its turnover every year. But Cronborg is not the only one who experiences success; also its subcontractors are expanding. In 2013-2014 alone Cronborg and its subcontractors expect to create a total of 41 new jobs. Green procurement of heating systems from both public and private clients is included in this calculation.

163. “The sale to Hedensted Municipality helps ensure the positive development”, says Hanne Kronborg, and adds, “we find it easier to get through to new customers when we say that we have sold a system to Hedensted. It makes a difference”.

DIMENSION 4. PROFESSIONALISING GPP

164. The case study from Belgium shows how to implement GPP solutions and develop practical green procurement guides, through the example of the Belgian Sustainable Procurement Guide. The case study from Slovakia is an example of a wide education effort on GPP. The Austrian case study explores the Öko Kauf Wien – ecologically sound procurement of Vienna.

BELGIUM

Context

165. As in most countries, since the 1999-2003 parliament, the Belgian government has attached great importance to issues of sustainable development, appointing a Secretary of State to oversee this area as well as creating the Public Service for Sustainable Development Planning (PODDO). The Secretary of State immediately realised that the Belgian federal authorities could not roll out a sustainable public procurement policy without a (web-based) user's guide outlining the technical sustainability criteria that need to be factored into specifications for the purchase of supplies and services alike. An initial version of the website went online before the end of the 1999-2003 parliament, and was entitled the Sustainable Procurement Guide. In addition, channels for on-going dialogue had to be established between the government, enterprises and purchasing units.

166. Each federal ministerial department was instructed to set up a Sustainable Development Cell (an instruction formalised by Royal Decree). A consultation network known as the Interdepartmental Commission on Sustainable Development (CIDD) was constituted to oversee these sustainable development cells.

167. On 16 May 2002, the Procurement Advice and Policy (CPA) Cell was established. Its management plan incorporated a strategic objective with regard to sustainable procurement, along with a variety of operational goals and projects. In parallel, the Central Procurement Body for Federal Services (CMS) was established, with a management plan calling for special attention to be given sustainable procurement.

168. Lastly, a consultation network was launched in September 2002. Items on the agendas of its meetings frequently concern sustainable procurement issues. The network's membership comprises a representative from each Federal Public Service (SPF) and each Public Planning Service (SPP), a representative from each semi-public social body, a member of the Building Authority and a representative of the Tax Inspectorate.

169. All of these bodies contribute to formulating a federal policy for sustainable procurement and ensuring ready dialogue.

Objectives

170. The objectives of the project are to:

- continuously pursue an affirmative, positive and evolving sustainable procurement policy

- consider how federal purchasing units can apply environmental criteria more widely in all public procurement of supplies and services

- consider how federal purchasing units can apply social criteria in certain instances of public procurement of supplies and services

- consider how ethical criteria, in particular the core International Labour Organization's conventions, can be incorporated into all federal government procurement of supplies and services, with a specific goal to monitor that these core conventions are complied with from A to Z.

Implementation

171. The following authorities implement environmental, social and ethical criteria:

- Public Service for Sustainable Development Planning – PODDO (knowledge centre)

- Procurement Advice and Policy Cell – CPA (purchasing policy)

- Central Procurement Body for Federal Services –CMS (trendsetter)

- Interdepartmental Commission on Sustainable Development – CIDD; sustainable development cells; and the consultation network (channels of dialogue and communication)

- various federal government purchasing units (each of which contributes to the implementation of federal sustainable procurement policy).

- Companies supply information.

- Type of procurement procedure:

- With regard to procedures, there must be compliance with the general rules laid down by the European Treaty and European Directives, i.e. it must be ascertained whether objectives can be achieved by means of an open or restricted procedure, and if this is not possible, a negotiated procedure must be used.

- With regard to the drafting of specifications: a major preliminary market survey must be carried out to assess how sustainability clauses will affect competition and the final price.

- Stakeholders

- PODDO continuously updates the Sustainable Procurement Guide and advises on the correct interpretation of technical specifications and other clauses contained within it. In 2013 PODDO has 14 persons working in it.

- The CPA Cell encourages federal purchasing units to incorporate sustainability clauses into contract specifications, via the consultation network and its templates, which can be consulted at www.publicprocurement.be.

- The CPA Cell advises on the incorporation of sustainability clauses into contract specifications (templates, customised advice, etc.).

- The sustainable development cells assist buyers in incorporating sustainability clauses into contract specifications.

- The CPA Cell works hand-in-hand with the CMS to incorporate sustainability clauses into the CMS' contract specifications.

- The CPA Cell conveys feedback from the federal purchasing units, noted by the consultation network, to PODDO.

- The sustainable development cells also convey their experience to PODDO (via the CIDD).

172. To ensure good results, the Sustainable Procurement Guide must: i) be kept constantly up to date; ii) strictly match the possibilities of the sector concerned, without losing sight of competition and price considerations. Furthermore, PODDO has understood that it is important for purchasing units to be able to use sustainable procurement methodologies in the Communities (Flemish- and French-speaking) and Regions (Flemish, Walloon, Brussels Capital and German-speaking), as well as in provinces and municipal councils. Consequently, PODDO has set up a standing working party with members from the Communities, Regions, provinces and municipal councils. Indeed, it is vital that PODDO avoid falling into the trap of going it alone. The Sustainable Procurement Guide is therefore updated in collaboration with the other Belgian public bodies.

173. With regard to collaboration with businesses, a methodology has been developed (on the basis of good practices of public bodies outside the Belgian federal government). When initially compiling or updating technical specifications for products and services belonging to a certain industrial sector, the working party does not establish contact with sector companies, but rather with the professional organisation that represents the sector. The professional organisation mobilises the companies it believes are the best placed to help establish the technical specifications that perfectly match the capabilities of firms in the industrial sector in question. This working method has established realistic specifications that allow adequate levels of competition. This process is repeated for all professional sectors. The task is huge, but well worthwhile. Indeed, it was initially found that incorporation of the technical specifications featured in the Sustainable Procurement Guide had no impact on the regularity of the tenders submitted.

Impact and monitoring

174. The CPA, via feedback from the consultation network, and PODDO, via feedback from the CIDD, have noted that the technical specifications featured in the Sustainable Procurement Guide are increasingly being used by the federal purchasing units (and copied by the purchasing units of other Belgian public bodies), thanks to their reliability. The consultation network and the CIDD are in charge of monitoring.

Challenges and risks

175. It goes without saying that industrial sectors in Belgium (and in the rest of the world) are not resting on their laurels and are constantly seeking to improve their products. This trend of permanent change introduces the risk that at any given time the technical specifications in the Sustainable Procurement Guide may no longer be up to date. The challenge is therefore clear: PODDO must be informed in a timely manner of all developments in products and services in the various industrial sectors.

176. To attain this objective, there should be three ongoing priorities:

- First, the CPA Cell must endeavour to take note of all comments put forward by members of the consultation network that might suggest irregularities in the Sustainable Procurement Guide. As PODDO also has a representative in this network, it is immediately aware of any anomaly.

- Second, PODDO should encourage CIDD to report any irregularity concerning the Sustainable Procurement Guide. Thus, the sustainable development cells also play an important role in this process.

- Lastly, PODDO should encourage the professional organisations that helped to draft the technical specifications (and which have a sense of "ownership" to these specifications) to report any developments that might require a review of the technical specifications in the Sustainable Procurement Guide. There is a real chance that professional organisations will actively and proactively co-operate with the process since they implemented a communications campaign with their members at the time that the companies in their sector were first mobilised. As a result, it is in their best interests to report any developments in their sector to ensure that they retain their credibility vis-à-vis their members.

Key lessons learnt

177. The following lessons have been learnt from the incorporation of technical specifications into the Sustainable Procurement Guide:

- All interested parties must work together.

- A highly influential sponsor is needed. In this case, the sponsor is the Belgian federal government.

- Companies need to be convinced that active collaboration is in their best interests.

- Communication channels with all parties and stakeholders must be active at all times.

- Results obtained must constantly be reviewed and challenged.

- There should be no complacency, striving to achieve better results should be an on-going objective.

SLOVAK REPUBLIC

178. The "National Action Plan on Green Public Procurement in the SR for years 2011 to 2015" (NAP GPP II) was prepared by the Ministry of Environment of the Slovak Republic and approved by the government on 18 January 2012. Its goal is to reach 65% of green public procurement of all tendering procedures at the central government level and 50% at the local level by 2015.

179. In order to fulfil the objectives laid out in the NAP GPP, the Ministry of Environment co-operates with an expert agency – the Slovak Environmental Agency – Centre of Waste and Environmental Management (SEA COHEM).

180. The first NAP GPP in the Slovak Republic was approved in 2007, when the foundations for green public procurement were laid, and documents and procedures for this activity already exist. The focus for 2012-15 is on educating public authorities, purchasers and suppliers.

Objectives

181. In order to achieve the strategic goals of the NAP GPP II, it is necessary to involve more public organisations, as well as municipalities, in the educational process. The involvement of these entities can be increased by an active approach through the implementation of educational activities for contracting authorities and contracting entities – propagation of technical information on GPP and related issues (eco-labelling, environmental management systems, energy labelling, green offices) to the widest possible group of stakeholders. The target group for educational activities are contracting authorities and entities of central state administration bodies and their subordinated organisations, at the level of regional governments and local authorities.

182. The task is based on Government Resolution nr. 22/2012, which approves the NAP GPP II and on Government Resolution nr. 1091/2007, which approves the Strategy of Voluntary Environmental Policy Instruments.

183. The aim is to use a proactive approach towards contracting authorities and entities to increase their awareness of the possibilities of applying environmental characteristics in the procurement process for specific contracts, to regulate the environmental performance of organisations financed from public funds and to increase the level of implementation of GPP in the Slovak Republic and thereby to contribute to the protection of the environment. The task has a link to the eco-labelling of products, the European Community Eco-Management and Audit Scheme (EMAS), the sustainable consumption and production (SC). Users of the outputs of this task are the Ministry of Environment of the Slovak Republic, the European Commission (EC), the public administration, local governments, organisations.

184. In 2012, training sessions were organised by SEA – the Center of Landscaping, Environmental Upbringing and Education, between March and October in eight regional capitals. Lecturers from the Ministry of Environment and SEA COHEM presented four lectures in the form of Powerpoint presentations: NAP GPP in the SR for years 2011-2015; Benefits of green public procurement; Sources of environmental characteristics; and Questionnaire for monitoring and assessing the level of GPP in the SR: Methodological guidance for its completion. Part of the seminars was a practical exercise – inputting environmental characteristics in the process of GPP.

185. The training was attended by a total of 166 participants in 2012 and is part of an on-going education campaign.

Impact and monitoring

186. The realisation of this project was a success. The evaluation of the NAP GPP I stated that although GPP is a voluntary instrument of environmental policy, it plays a key role in EU efforts for a resource-efficient economy. With the support and use of GPP, public authorities can provide industry with incentives for developing environmentally friendly technologies and products. In some sectors, contracting authorities have a large market share (e.g. public transport and construction, health and education), so their decisions have a significant impact. Using their purchasing power to choose environmentally friendly products, services and works can significantly contribute to sustainable consumption and production. To achieve these objectives, it is necessary that all participants in the process are informed of all the actions intended to educate in the field of GPP.

187. Based on the monitoring and evaluation of GPP in Slovakia, which took place by distributing 450 questionnaires to respondents (contracting authorities of the central government, regional authorities and cities in Slovakia) following results were measured:

1. the proportion of green procurement in the total number of procurement contracts rose from 2.1% in 2011 to 5.0% in 2012, i.e. by 2.9 percentage points;

2. the proportion of the value of green contracts in the total value of procurement contracts declined by 21.6 percentage points;

3. Observed data demonstrated that GPP rose in number, but declined in value, which could be due to the economic recession.

Challenges and risks

188. The project carried out in 2012 will also be carried out in 2013, following a few small adjustments, as only part of the contracting authorities and entities had been trained. Workshops will continue to be organised in regional towns and will continue to be free for participants. The issues presented are continuously updated, so that participants receive up to date information that will help them to implement GPP within their scope.

Key lessons learnt

189. Education in GPP is a very good form of assistance to institutions/offices who want establish and maintain their competence in green procurement because it provides practical guidance and answers to basic questions:

- Why use this type of procurement?
- Guiding principles and methods of application of GPP
- Introduction and realisation of green procurement.

AUSTRIA

Context

190. ÖkoKauf was set up in 1998 as a project for purchasing ecologically sound products and services during the preparation of the first climate protection program of the City of Vienna ("KliPWien"). It was recognized that public procurement could be a key contributor to climate protection measures, given that the procurement expenditure of the City of Vienna amounts to 5 billion euro p.a. About 50% of this budget is spent on supplies and the other half on works and services.

191. ÖkoKauf is a leading program within the framework of the above mentioned KliPWien strategy, which was finally decided by the city council of Vienna in 1999. It aims at restructuring public procurement of the Vienna city administration with regard to climate protection aspects while respecting the requirements deriving from EU law and achieving value for money. In 2009 the program was extended until 2020 to enforce the reduction of emissions of the administration of the city of Vienna.

Objectives

192. The main target of ÖkoKauf is to identify products and services with relevant potential for including ecological performance aspects and develop respective requirements for these products and services with regard to the procurement process. These requirements are an essential element of the (technical) specifications of the products and services, which are purchased by the city of Vienna, all its services and entities. Apart from the ecological assessment, economic efficiency (value for money) as well

as maintenance and improvement of the usability of the purchased goods and services are important factors and require cooperation with economic operators.

193. High priority is further given to immediate feasibility and legal compliance. Consequently, ÖkoKauf focuses on standards for defining the subject matter of the contract ("what is purchased") while tailored award criteria or contract performance clauses are of minor relevance. The key tools provided by ÖkoKauf are tender documents, catalogues of criteria and other procurement related requirements (e.g. position papers).

194. Apart from achieving technically measurable results, ÖkoKauf also aims at raising awareness of the city's employees, private households and businesses towards buying ecologically sound goods and services and publishes its results on a publicly accessible website.

Implementation

195. Within the administration of the city of Vienna, ÖkoKauf is an organisation-wide program (encompassing all the services of the city). It is operated in the city construction directorate by a program leader and two deputies with the support of a steering team, which takes all the relevant decisions. The work is organised in 26 thematically different working groups attended by 200 employees from all divisions of the city's administration. Additionally, two committees were established for legal aspects and public relations and two assistant units for budgetary advice and international activities. Each working group and the leaders of the committees and units are members of the steering team. Besides using the existing organisational resources (staff and facilities), ÖkoKauf receives an annual budget of 300.000 euro, which is mainly spent on external support, e.g. studies, research and experiments. Further, ÖkoKauf regularly organises and participates in relevant conferences.

196. The substantial work is carried out in the mentioned working groups. With regard to their topics, notably: paper and printing, electric and electronic devices, construction and facility management, car pool, food, events, disinfection and cleaning agents, textiles, furniture, lighting etc., they develop, evaluate and update ecological criteria that describe the goods and services to be purchased. The results are cross checked with the legal compliance committee and then published. The publication is accompanied by public relation activities to promote the use of the criteria on a broad basis (inside and outside of the city's administration).

197. As of 2003 all services of the city of Vienna are obliged (per ordinance of the director general of the administrative services) to take the results of ÖkoKauf into account. This means in practice that the responsible procurement officer integrates the relevant texts from ÖkoKauf into the specific tender documents and thereby makes sure that the ecological requirements become part of the contract.

Impact and Monitoring

198. Since its establishment in 1998, ÖkoKauf has developed around 130 results for the handled goods and services that are used in practice. Cautious estimates of its success state that the city of Vienna by applying the results of ÖkoKauf achieves annual savings of 17 million euro and 30.000 tons of CO2 emissions.

199. The following examples shall show some of the assumed and verified effects (so far, only few of the results were subject to individual evaluation, due to technical complexity and lack of resources):

- The use of recycled paper for producing office arrangement systems and hygienic paper preserves resources and reduces environmental impact in terms of waste water and energy consumption.

- The production of organic food emits less CO2 in comparison to products from conventional agriculture. Through the procurement of organic food using ÖkoKauf criteria, the city of Vienna avoids up to 20.000 tons of CO2 emissions p.a.

- Changing to energy efficient office and household devices, lighting, electronic equipment, etc. helps saving energy and emissions.

- Simple changes of processes can considerably influence the environmental impact as the example of using microfiber tissues shows: cleaning staff received a special training on the use of the new material, which resulted in an essential decrease in consumption of cleaning agents.

- In the construction area there is a variety of methods and materials that can reduce harmful emissions, energy consumption and increase the life period of buildings ("Wiener Wohnen", a city owned undertaking for housing manages and maintains around 220.000 flats).

200. Another impact can be observed in the market: in some areas, products and services which did not comply with ÖkoKauf requirements have completely disappeared from the market.

201. So far, ÖkoKauf does not have a fully fledged monitoring system, but rather functions as a self-regulating process through the continuous work of the 26 different working groups, where feedback from practice is taken into account.

Challenges and Risks

202. When ÖkoKauf was set up in 1998 the main challenge was to raise awareness for the importance and feasibility of ecologically sound procurement at the level of policy and decision-makers, who essentially influence the availability of resources for the project (in terms of staff and budget) and its continuity. The political support of the city councillor for environment helped to initiate the project and to overcome the generally persistent prejudice that ecologically sound (or biological) products and services are more expensive than conventional offers. In practice, it was possible to refute this prejudice in many areas with the exception of the procurement of organic food, which actually led to a measurable increase in costs.

203. A basic and future challenge is the professionalization of the current system in terms of monitoring, verifying and mainstreaming its results. As already mentioned, for the time being ÖkoKauf functions as a self-regulatory system through feedback to the working groups and the continuity of their work. As the respective employees do not work full-time for the project, horizontal administration of the results (monitoring application, measuring impacts, etc.) is currently weak. For keeping and enhancing high standards, ÖkoKauf would definitely benefit from establishing a permanent evaluation and administration system, which improves the monitoring of the results in terms of environmental impact and economic efficiency.

Key Lessons Learnt

204. Apart from receiving high level political support, two of the initial leading decisions were key factors for successfully implementing the ÖkoKauf project:

- focussing the work on the development of standards to define and describe ecologically sound products and services instead of defining qualification and award criteria and contract clauses, etc. helped to overcome the scepticism of procurement staff, who are essential for the uptake of the results in practice;

- the establishment of the legal committee boosted the acceptance of the results of the project, because legal correctness plays an important role in procurement practice.

205. Further, although this remark may seem trite, it is important to start the work without fearing to fail or to make mistakes, because if they happen they help to improve results. Tangible results, notably economically measurable advantages sell by themselves.

206. Finally, it is important to constantly consolidate results and professionalize the project in terms of expertise and organisational adaptation to avoid standstill and outdated standards.

207. For further information see: http://www.oekokauf.wien.at

DIMENSION 5. AWARENESS RAISING

208. The case study from Hungary shows efforts to educate buyers in the benefits of green products, undertaken by the Hungarian central purchasing body PPSD vis-à-vis entities which use its framework agreements. The case study from Portugal contains an example of events and communication strategy to promote GPP. Strengthening innovative businesses in Vienna will be covered in the Austrian case study.

HUNGARY

Context

209. The Public Procurement Supply Directorate (PPSD) is an autonomous central purchasing body, which is the successor of the former Public Procurement Service Directorate. The rules on the centralised public purchasing system operated by the PPSD are set out in Government Decree 168/2004 (V. 25.) (hereinafter referred to as Gov. Decree). The PPSD conducts procedures for the following specific products (or services):

- communication services and tools
- IT systems and services
- office technology and services
- office furniture
- stationary products and paper
- vehicles
- fuels
- travel arrangements
- electronic public procurement services – electronic auction service.

210. A centralised public procurement procedure is conducted by the PPSD particularly for organisations defined in the Gov. Decree: ministries, the Prime Minister's Office, organisations with a national competence and other bodies with their own chapter of the Central Budget Act (CBA), budgetary organs managing social security funds having a national jurisdiction, organisations and persons having other authorisations as defined in chapters of the CBA, and budgetary organs under the control of the afore-mentioned bodies (except for some organisations set out in the related regulation: e.g. national security services, foreign representations). Other organisations may voluntarily join the central purchasing system.

211. The PPSD applies green criteria during centralised public procurement procedures and, where possible, increases the number of environmentally friendly products. The PPSD applies environmental

requirements in its procedures and contracts in many ways: in defining the subject matter, in the technical specifications, in the award criteria or in the contract terms.

Objectives

- increase the use of green criteria in public procurement procedures
- ensure the appropriate variety and favourable prices in cases of environmentally friendly products
- increase the proportion of environmentally friendly products purchased by the PPSD (currently 10% for paper products)
- promote environmental thinking and achieve a change of attitude by means of communication.

Implementation

212. In 2013, the PPSD plans to publish six procedures including environmental criteria (one for paper and stationary, four for IT and one for fuel procurement), the aggregated value of which is HUF 129.5 billion (paper and stationary: HUF 5.5 billion; IT: HUF 118 billion; fuel: HUF 6 billion) in 2013. The terms of the contracts will be for 24 and 48 months. Five out of the six procedures will be published as open and one as a negotiated procedure with a prior publication of a contract notice.

213. The green criteria to be applied in the procedures are:

- Paper and stationary products:
  - environmentally friendly products (envelopes, folders and other paper products for office purposes)
  - environmental management standard (ISO 14001)
  - technical specifications: environmental labels (FSC, NordicSwan, Blue Angel), ecolabels, recycling.
- IT:
  - EU standards
  - energy consumption (standby and switched off mode)
  - noise level
  - waste management (delivery, recycling, extermination)
  - remanufactured products.
- Fuel:
  - EU standards and environmental, sustainability criteria
  - alternative fuels (biodiesel, bioethanol).

214. The PPSD publishes information on its website (www.kozbeszerzes.gov.hu) regarding the types of available products and their environmentally friendly features. Contracts and all other documents related

to centralised public procurement procedures are also available on this website (in pdf format or in databases). The PPSD also conducts presentations and briefings on available green products.

Impact assessment

215. The PPSD has not yet conducted an impact assessment procedure.

Challenges and risks

- establish an environmentally conscious environment
- achieve an attitude change in the public administration
- compliance with EU and national public procurement rules.

Key lessons learnt

- The public procurement market (including the centralised public procurement market) is an efficient tool for creating an environmentally friendly attitude and promoting environmentally friendly products.
- In order to achieve the targets, it is important that social and state requirements are set in compliance with economical interests (cost efficiency, favourable tender prices).
- While conducting green public procurement procedures it is really important to take into consideration the products' and necessities' effects on each other (for instance, the printer and the paper or the compatibility of the fuel and the motor vehicle).
- It is important to define the methods aiming to promote groups of products.

PORTUGAL

Context

216. eSPap is the managing entity of the National System for Public Procurement (SNCP), and centrally manages the state-owned fleet, contributing to increasing the efficiency of the Portuguese public administration.

217. The main goals of eSPap are:

• economic: increasing savings in public procurement (contributing to sound and stable public finances by making a better use of taxpayers' money)

• environmental (green public procurement): gradually incorporating environmental requirements within the selection and awarding criteria in public tenders.

218. Currently, eSPap runs 16 framework agreements covering the following categories of goods and services: mobile communications, hardware, paper and stationary, printing and copying, software, cars and motorcycles, fuel and liquified gas, energy, cleaning services and goods, security and surveillance services,

travel and accommodation, landline communications (voice and data), meals (catering), e-tendering tools, office furniture, electric vehicles.

219. These framework agreements allowed eSPap to achieve EUR 155 million of savings for the period 2009-12, with 269 qualified suppliers, for a total of EUR 1 000 million annual public expenditure common to SNCP entities.

220. Regarding the implementation of green public procurement, eSPap was an active member in the implementation of the National Strategy on Green Public Procurement (2008-10) established by the Resolution of the Council of Ministers n.º 65/2007 (RCM) of 7 May, which includes a range of the following categories of priority goods and services: design and construction of public works, including lighting and appliances; transport, including equipment and transport services; energy; office equipment, including computer equipment, communications, printing and copying, including computers, printers, copiers, faxes, multifunction devices; office supplies (including paper); hygiene and cleanliness; services in the management and maintenance of equipment and public infrastructure.

221. Considering these priority categories, eight framework agreements have green criteria, representing 50% of the total of framework agreements established by eSPap.

Objectives

222. The main goals of the GPP for 2009 were for 30% of the pre-awarded procedures to include environmental criteria and for 30% of the value of public procurement procedures to include environmental awarding criteria. For 2010, this percentage was increased to 50%.

Implementation

223. In order to achieve these objectives the ministerial purchasing units (linked entities of SNCP), committed themselves with a Declaration of Commitment.

Impact and monitoring

224. Based on the contracting entities report, in 2009, over 41% of procedures and more than 61% of the total value of purchases of goods and services that fall into priority categories defined in the RCM 65/2007 made by procurement entities incorporated environmental criteria or requirements, therefore surpassing the objective.

Table 2. Impact and monitoring, Portual, Green procurement 2009

Priority goods and services	Ecological criteria	Nº of Procedures	Value
Paper	Y	457	3.907.165,56 €
	N	317	200.478,87 €
Office Equipment	Y	486	7.522.181,47 €
	N	585	6.200.060,40 €
Stationery	Y	962	10.468.895,27 €
	N	1959	4.242.490,57
Energy	Y	21	2.696.838,93 €
	N	3	4.511.040,13 €
Cleaning services and products	Y	476	6.289.400,30 €
	N	546	742.984,46 €
Construction	Y	9	383.621,12 €
	N	113	3.136.368,82 €
Transport	Y	1018	3.571.787,91 €
	N	1358	2.586.682,07 €
Total		**8310**	**56.459.995,88€**
% of procedures with ecological criteria		41,26%	61,71%
Goal 2009		> 30%	> 30%

Source: eSPap, I.P.

225. In 2010, over 56% of procedures and more than 60% of the total value of purchases of goods and services that fall into priority categories defined in the RCM 65/2007 incorporated environmental criteria or requirements.

Table 3. Impact and monitoring, Portual, Green procurement 2010

Priority goods and services	Ecological criteria	Nº of Procedures	Value
Paper	Y	2647	9.258.643,17 €
	N	8677	1.042.717,41 €
Office Equipment	Y	294	9.795.607,99 €
	N	651	3.032.202,40 €
Stationery	Y	31593	16.163.101,88 €
	N	10523	6.684.355,72 €
Energy	Y	9	370.287,84 €
	N	71	7.080.267,92 €
Cleaning services and products	Y	1386	12.049.384,72 €
	N	5600	10.897.870,91 €
Construction	Y	104	12.301.196,31 €
	N	457	9.972.208,81 €
Transport	Y	144	8.673.877,00 €
	N	1463	5.404.928,08 €
Total		**63619**	**112.726.650,17€**
% of procedures with ecological criteria		56,87%	62,87%
Goal 2010		> 50%	> 50%

Source: eSPap, I.P.

Challenges

226. The selection of the priority categories of goods and services is one of the most critical aspects when establishing a National Strategy on Green Public Procurement. Additionally, the implementation of well-structured monitoring mechanisms is essential to a good evaluation of the strategy impact.

227. In order to increase the awareness of the stakeholders, a communication plan must be set up. Considering the Portuguese example, and regarding the 2008-2010 strategy, there were held several events to promote the green public procurement strategy. There was an international event in July 2010 with the participation of the European Commission, a Road Show in 7 different cities across the country, to promote the SNCP and the Green Public Procurement strategy. Both eSPap and APA developed specific sections on its websites to promote the awareness on GPP issues.

Success factors

228. Green Public Procurement is one of the pillars of the SNCP. 50% of the existing framework agreements have green criteria. Additionally, in most of the call offs, contracting authorities are required to include green criteria. Additionally, the Declaration of Commitment signed by each MPU drove to a successful implementation of the strategy.

New National Strategy on Green Public Procurement (2013-2016)

229. For the period between 2013 and 2016, eSPap with the Portuguese Environment Agency (APA), prepared a new National Strategy on Green Public Procurement with goals to increase the range of priority goods and services and the linked entities (Local Government and State owned companies), besides the current scope of SNCP (1800 entities). This Strategy was presented to the Portuguese Government and is due to be approved in June 2013.

230. Also, a major improvement in the new GPP Strategy for Portugal is forecasted to be achieved in terms of monitoring and reporting, as this area was the principal weakness of the previous approach.

AUSTRIA

Context

231. In 2006 the city of Vienna started a comprehensive strategic process titled “Vienna thinks future” to deal with the challenges of developing a knowledge based society, as the effective use of knowledge and attracting intellectual resources were seen as key factors for Vienna as a competitive business location. The resultant Viennese strategy for research, technology and innovation (RTI Strategy) was published in 2007 and identifies five relevant fields of action, one of which is to make Vienna a “greenhouse” for research and innovation. It was decided to focus on business oriented innovation, given the enormous volume of procurement in Vienna, which therefore can be used as an instrument to stimulate innovation from the demand side.

232. The respective tasks in the context of the RTI Strategy were assigned to “ZIT Zentrum für Innovation und Technologie GmbH” (centre for innovation and technology, an agency owned by the Business Agency Vienna “Wirtschaftsagentur Wien” of the city of Vienna.), accompanied by revised funding guidelines. ZIT developed the “WienWin” initiative, which started in 2009.

Objectives

233. WienWin aims at strengthening Vienna as a business location by using the purchasing power of the city of Vienna, its services and entities to enhance the development of innovative products and services and to support sustainable growth of innovative undertakings in Vienna. Procuring authorities shall function as pioneer users and create a lead market for innovative goods and services.

234. It sets up a framework for systematic exchange of information between public purchasers in Vienna and innovative undertakings on one side and the centre for innovation and technology – ZIT on the other side.

235. The project shall provide public purchasers in Vienna with an overview over available innovations in the market. In order to enforce a public procurement culture, which promotes innovation, know how shall be built up through various instruments and continuous dialogue supported by qualified input.

Implementation Process

236. To realize the public procurement related objectives in the context of the RTI Strategy, the centre for innovation and technology – ZIT established an expert working group on public procurement and innovation, which developed the WienWin initiative. It consists of four main tools:

1. Internet platform

237. A website (www.wienwin.at) was set up to collect examples of innovation in Vienna. To keep to high quality standards, WienWin.at exclusively presents products and services that were either developed with funds from a regional, national or European funding institution or where the level of innovation has been subject to evaluation by an expert jury. Innovations are presented following a uniform scheme.

2. City talk and individual dialogue

238. In individual dialogues with members of the administration of the City of Vienna (including enterprises that are owned or mainly influenced by the City) ZIT experts survey the innovation topics in the city and provide information about fitting solutions from Viennese companies. If there is an interest, businesses are invited to present their innovations personally in so called City Talks, where potential users get the possibility to check innovative solutions and innovative enterprises get the possibility to convince the administration to dare the application of innovative solutions. However, it is clear that any subsequent procurement procedure after City talks has to comply with all legal standards of public procurement.

3. Making WienWin situations visible

239. If an innovation developed by a Viennese undertaking is already used by the city of Vienna, ZIT takes public relation measures (science and media communication) to show where and how the innovation is used. It issues reports to present the respective businesses to motivate others to introduce innovative solutions in their fields.

4. Concepts for innovation oriented procurement

240. WienWin primarily aims at offering procurement managers a better market overview over available innovations, but it is also based on the assumption that enforcing an innovation oriented procurement culture can only be achieved through a policy-mix. The current work therefore emphasises the provision of qualified input on the following subjects: life cycle costs and their calculation, incentive

systems for procurement of innovation, pre-commercial procurement and development of innovative city technologies.

241. WienWin is handled within the organisational set-up of ZIT, which employs 26 people. Since March 2011 WienWin is co-financed by the EU regional fund and disposes of an annual budget of app. 440.000 EUR and five employees (3,5 FTE). They analyse fields of application of innovations, develop standardised presentation models for innovations and organize workshops. WienWin services around 450 purchasers of the Vienna city administration and its undertakings.

Impact and Monitoring

242. WienWin is based on the persuasion that it is beneficial for both sides, if a city uses innovative solutions from businesses for fulfilling its public tasks:

- Public services are tailor-made to optimally comply with regional requirements.
- SMEs are motivated to invest in research, development and innovation, if they can win the public sector as a lead market, which raises the innovation capacity of the business location.
- The public sector facilitates local reference projects for SMEs, which are essential for the growth of these undertakings.
- The use of technology based innovations for public services may have a visible impact on the image of a city and attract innovation.
- Cooperation between the city and local undertakings is deemed to increase identification with the region.

243. So far WienWin has organised 121 dialogues with decision-makers of the city administration and businesses to identify areas that require innovative solutions and planned joint follow up actions. Further, undertakings presented innovative products and solutions to potential users in 18 City talks.

244. WienWin.at currently presents more than 200 examples of innovative solutions in 12 different areas (e.g. construction, education, tourism, health, environment, etc.).

245. In 24 cases WienWin accommodated cooperation between the Vienna city administration and innovative undertakings.

Challenges and Risks

246. Current research in the field of innovation policy notes a gap between research push and market pull and the resulting difficulty for enterprises to bring innovative solutions into the market. To bridge this gap various funding schemes are provided at international, national and regional level to strengthen the research pull. An increasing number of expert groups recommend complementing public funding for research and innovation by new measures to strengthen the market pull for innovation.

247. WienWin is one of the pioneer activities to make the convincing idea of fostering innovation by public procurement work in practice. It tries to bridge the gap between innovation policy, public administration and constraints of public procurement.

248. To evaluate the impact of the measures taken so far, a continuous monitoring process has been set up for the WienWin project. Studies are foreseen in the project to survey barriers and good practices for the public procurement of innovation.

Key Lessons Learned

249. WienWin helps to bridge the gap between public promotion and funding of innovative projects on the one side and public procurement on the other side. Awareness for cultural differences in these fields of public administration is a key condition for success.

250. For further information see: http://www.wienwin.at

DIMENSION 6. MONITORING GPP

251. The case study from Canada shows monitoring channels for government departments and agencies, which are required to report their forecasted and actual progress on green procurement annually through publically available parliamentary reports. The case study from Consip, the Italian central purchasing body, gives concrete examples on measuring and monitoring the results of GPP. The United States case study describes the Federal Government's experience with monitoring sustainable public procurement. The Austrian case study explores purchasing green electricity with the Federal Procurement Agency.

CANADA

Context

252. The Policy on Green Procurement was developed in 2006 in response to the following issues highlighted by the Commissioner of the Environment and Sustainable Development:

- Central direction on green procurement is missing.
- There is no federal green procurement policy or strategy.
- The government is not using green procurement as a tool to achieve sustainable development objectives.
- Key federal documents do not address the responsibilities of buyers and suppliers as they relate to green procurement.
- There is no basis for assessing progress on green procurement.

253. As part of the government's on-going commitment to improve the environment and the quality of life of Canadians, the Policy on Green Procurement seeks to reduce the environmental impacts of government operations and promote environmental stewardship by integrating environmental performance considerations in the procurement process.

Objectives

254. It is expected that the Policy on Green Procurement will:

- demonstrate environmental leadership and influence industry and citizens to use environmentally preferable goods, services and processes
- stimulate innovation and market development of, and demand for, environmentally preferred goods and services, making these available and mainstream for other sectors of society
- support emerging environmental technologies

- benefit the environment by contributing to environmental objectives
- result in more environmentally responsible planning, acquisition, use and disposal practices in the federal government
- support a healthier working environment for employees and for citizens in general through the purchase of environmentally preferable goods and services.

255. Immediate outcomes of the policy include:

- increased consistency and transparency in green procurement reporting requirements for all government departments
- increased availability of appropriate information and tools for use by all government departments to implement the Policy on Green Procurement.

Implementation process

256. The implementation strategy for the Policy on Green Procurement is based on the following principles:

- integration of environmental performance considerations in existing procurement processes, policies, procedures, tools and instruments using a life-cycle analysis approach in the context of achieving value for money;
- monitoring and reporting (e.g. through reports on plans and priorities and departmental performance reports) to support continuous improvement in the integration of environmental performance in procurement, including through the Federal Sustainable Development Strategy
- a co-ordinated government-wide approach to optimise information-sharing, consistency of approach and performance measurement.

Implementation activities are focused on three key areas:

- inclusion of environmental specifications and evaluation criteria in centrally managed procurement administered by Public Works and Government Services Canada
- development and sharing of green procurement information and tools, such as guidelines and training, to support all departments and agencies
- systemic integration of environmental performance in the procurement decision-making processes of all departments, including establishing departmental green procurement targets that are aligned with government priorities.

Implementing authorities

257. Development and implementation support of the policy has been led by Public Works and Government Services Canada in collaboration with Environment Canada, Natural Resources Canada and the Treasury Board of Canada Secretariat.

258. Within Public Works and Government Services Canada, support of policy implementation is divided between the Office of Greening Government Operations (OGGO) and the Acquisitions Branch. The OGGO leads the overall management and support of government-wide policy implementation, including interdepartmental engagement. The OGGO also develops tools such as training material and guidance and leads the development and implementation of the government-wide planning and reporting mechanism for the greening of government operations. The Acquisitions Branch supports the achievement of the policy objectives by integrating environmental performance considerations into its centrally managed federal procurement instruments, policies, procedures and business tools, including supplier communication tools.

259. The deputy heads of all departments and agencies as defined within the meaning of Section 2 of the Financial Administration Act are required to ensure that the objectives of green procurement are realised in their organisations.

Stakeholders

260. Stakeholders include the federal government of Canada's employees (such as procurement and materiel management staff) and suppliers.

261. Government of Canada departments carrying additional responsibilities are Public Works and Government Services Canada, Environment Canada, Natural Resources Canada and the Treasury Board of Canada Secretariat.

262. Consultations on the policy design and implementation were undertaken through an interdepartmental task group on green procurement and bilateral meetings with a number of federal organisations.

263. Public Works and Government Services Canada conducts consultations with centralised procurement officers, client department procurement officers and suppliers throughout the process of including environmental specifications and evaluation criteria in centrally managed procurement.

Progress

264. Significant progress has been made in implementing the Policy on Green Procurement.

265. Fundamental policy machinery is in place, including:

- a governance structure
- an implementation plan
- guidance and tools
- free online training available to Government of Canada employees from the Canada School of Public Service (course C215).

266. The Government of Canada establishes government-wide procurement instruments for commonly procured goods and services. Departments purchase from these procurement instruments. Green procurement is integrated into the development process of these instruments through the use of green procurement plans. Green procurement plans are developed in collaboration with procurement experts for the given commodity and client departments and they:

- outline key environmental impacts for a given commodity
- indicate the procurement actions that can be taken to mitigate these impacts
- gather information on the progress of implementing the Policy on Green Procurement for a given commodity.

267. Suppliers are actively engaged in this process to assess their readiness to respond to environmental performance criteria, through routine consultations with industry, surveys and requests for information. This information is communicated in the Green Procurement Plan and taken into consideration. Environmental performance considerations are phased into the instruments such that each renewal contains increasingly stringent criteria. The Green Procurement Plan includes a scorecard that outlines the criteria currently being used, the criteria included in the current renewal and the criteria anticipated for the next renewal. This information is communicated to suppliers, allowing them time to prepare for the next renewal, thus maintaining supplier competition.

268. Information technology (IT) hardware is an example of a commodity where many environmental criteria have been included in the Standing Offer using this process, including:

- All desktop and notebook systems as well as monitors are certified through the Electronic Product Environment Assessment Tool (EPEAT Silver level).
- Desktop systems and monitors are EnergyStar 4.0 certified.
- Monitors are TCO'03.
- Desktop systems include high efficiency power supplies (80plus).
- All manufacturers represented on the Standing Offer are members of good repute of a recognised entity specifically established to address end-of-life electronics recycling and reuse in Canada.
- Desktop Category 1.0D and 1.0A Green PCs have reduced materials (with a smaller case and integrated components) and lower power consumption. For further examples, see the Green Goods and Services List.

269. Where no centralised procurement instrument exists, the environmental considerations used for similar goods and services can be used in other procurement activity. The guidance and tools found on the Office of Greening Government Operations website and the Acquisitions Branch Green Procurement website should also be consulted.

Impact and monitoring

270. All departments and agencies are required to report their forecasted and actual progress on green procurement annually through publically available parliamentary reports (the Report on Plans and Priorities [RPP] and Departmental Performance Report [DPR], respectively.) Beginning in 2008/09, the Treasury Board Secretariat Guidance provided specific instructions to all departments and agencies on how to report their progress on green procurement in their annual RPP and DPR.

271. An evaluation framework and government-wide performance measures were developed in order to monitor the policy implementation as well as assess its effectiveness after five years of being

implemented. Public Works and Government Services Canada is currently conducting an evaluation of the policy in order to assess its relevance and performance.

272. Monitoring of the inclusion of environmental specifications and evaluation criteria in centrally managed procurement administered by Public Works and Government Services Canada is ongoing.

273. The Policy on Green Procurement is founded on the principle of value for money and requires the integration of environmental performance considerations into the life-cycle costs of goods, services and construction, as opposed to focusing only on the up-front acquisition costs. Many factors are taken into consideration when assessing "value" and making procurement decisions, for example, quality, performance, price, environmental performance and availability.

274. Furthermore, using a life-cycle approach to examine costs associated with a commodity allows us to consider not only the purchase price but also the costs associated with operating, maintaining and disposing of the good.

275. For example, the procurement tool for purchasing computers (Computer Acquisitions Guide) contains two columns for pricing: price and evaluated price. The "price" column is the actual cost of the base system. The "evaluated price" column is only used for evaluation purposes. It is this score that allows the site to rank the system according to life-cycle costs. All of the systems on the Standing Offer are given a rank based on a weighted average of their price, performance, hardware features, total cost of ownership (TCO) features, environmental features and usability. The life-cycle approach to costs allows users to see what the best-value computer is and helps them understand that the lowest base price computer may not always be the best-value computer.

Challenges and risks

276. The main challenges faced included:

- maintaining procurement competition while advancing greening
- balancing environmental and other procurement objectives
- The high volume and variety of purchasing and people involved
- requires horizontal collaboration and strong engagement.

277. These challenges were foreseen based on previous experience implementing socio-economic objectives in the Government of Canada's procurement process. They were managed as follows:

- Competition is maintained by using a phased-in approach for the inclusion of environmental performance considerations using a process that engages both suppliers and clients.
- Environmental objectives are balanced with other procurement objectives by applying a value-for-money approach, increasing the awareness of environmental issues as well as the maturity of the market.
- The high volume and variety of purchasing and people involved is managed by prioritising implementation activities according to spend, environmental impact and ease of implementation. For instance, prioritising the integration of environmental considerations into centrally managed procurement instruments.

- One organisation (Public Works and Government Services Canada) has been tasked with horizontal collaboration and engagement across the Government of Canada.

Key lessons learnt

278. Key learning aspects included:

- A centre of expertise (i.e. Public Works and Government Services Canada) that can provide:
  - A foundation of training and governance
  - detailed guidance and operational tools
  - systemic integration in centralised procurement.
- Partner organisations (i.e. Office of Greening Government Operations and Acquisitions Branch) that separate policy implementation roles and responsibilities into policy machinery and operational implementation.
- Leveraging of the Federal Sustainable Development Strategy targets (i.e. integrating them into upcoming standard processes).
- Using a principles-based approach to keep pace with advances in technology and ensure that reductions in environmental impact are measured over the lifecycle of a good or service.
- Using a phased approach to maintain competition and seek continual improvement.

ITALY

Context

279. In November 2011 Consip SpA, the Italian central purchasing body owned by the Ministry of Economy and Finance (MEF), set the terms for a Framework Agreement (FA) on Desktop Outsourcing, that is, a public contract for the management of IT platforms, leasing of hardware (desktop and notebook PCs, printers, multifunction devices), software licenses and virtualisation services.

280. Consip SpA launched the FA on IT services for 70 000 workstations. A Framework Agreement on Desktop Outsourcing is an "incomplete" one, meaning a type of framework agreement with several economic operators where some terms of the contract have to be established in a second stage. Public bodies (PB) using this "incomplete" FA must accept the minimum requirements set by Consip. Moreover, they can set further award criteria as well as other technical specifications to specify the level of services they wish to obtain.

281. Consip runs market analysis on products and services through on-line questionnaires and face-to-face traceable meetings with suppliers.

Objectives

282. The main feature of this FA is the focus on energy efficiency and the rationalisation of IT infrastructure, a reduction of staffing costs and routine maintenance (upgrades and repairs of PC systems and servers). These requirements are met by purchasing an integrated service that assures an economic and ecological goal, rather than by purchasing a product.

283. Suppliers must offer the following services:

- a system for the digital management of documents (avoiding the use of paper, printers and related consumables, cost of renting archives)
- management of electronic waste
- customer service to evaluate the quality of services.

Implementation process

284. An incomplete FA is a useful tool since it:

- provides PBs with a high level of autonomy and flexibility
- makes several brands available
- is able to meet heterogeneous preferences by providing the PBs with different solutions.

285. The tender process is managed through an e-platform (set by Consip) enhancing paper dematerialisation and process savings. Prices and minimum requirements are initially set by Consip and are valid for the duration of the FA, which eases repeated purchases and subsequent upgrades from public authorities that use the FA as an example of joint procurement. Ecological requirements become part of the contract.

Table 4. Example of PC Desktop life cycle costing

PC Desktop Savings (Lotto1 Convenzione Desktop 11)		
	1 PC 42%ETEC	**1 PC Energy Star**
consume (kWh/y)	169,4	271
consume (€/y))	€ 23,72	€ 37,94
consume (€/5 years)	€ 119	€ 190
saving (€)	14,22	
saving (€/5 years)	71	
CO2avoided (Kg/y)	53	

We have compared 1 PC labelled as Energy Star 5.0 and 1 PC more efficient (42% of the maximum Etec Energy Star).

We have considered the cost for energy supply of 0,14 euro/kWh, 0,52 CO2 conversion factor (italian energy mix) and a life cycle of 5 years per PC.

Table 3. (Cont'd) Replacement of 1 PC Desktop with 1 PC Portable (LCC)

Desktop	
	1 PC 64%ETEC
Consume (kWh/y)	169,4
Consume (€/y)	23,72
Consume (€/5 years))	€ 119
Portable	
	1 PC 72%ETEC
Consume (kWh/y)	27,5
Consume (€/y)	3,85
Consume (€/5 years)	€ 19
Saving (€/y)	19,87
Saving(€/5 years)	99,35

Source: Consip – the Italian Central Purchasing Body

Impact and monitoring

- Thanks to the purchase of energy efficient desktop PCs certified Energy Star, this FA can generate savings of EUR 2.5 million, or the equivalent of 9 000 tonnes of CO_2 emissions avoided.
- The rational use of print and copy services by PBs can contribute to savings of EUR 9 million.
- Thanks to processes dematerialisation, every order performed above the EU threshold through Consip's purchasing instrument has allowed for unitary savings of EUR 42 000.
- The use of "duplex printing" could generate net savings ranging from 19-50% of the life-cycle costing (LCC).

286. The supplier is more willing to offer durable products so as to minimise assistance and maintenance costs (included in the FA); therefore the PBs are equipped with high-quality products.

287. The FA was used by the Italian Ministry for Infrastructure and Transport, which has already purchased IT services for 10 500 of its workstations and by the Italian Ministry of Economy and Finance, which purchased IT services accounting for 3 500 of its workstations.

Table 5. Use of the Framework Agreements in IT for government

120 workstations	HP 1 120 WG	HP 2 60 WG + 1MF	HP 3 12 WG + 1 MF	HP 4 2 MF	*WG (work-group)* *MF (Multifunction)*
Leasing (1 yr)	4.200	2.918	1.238	1.636	*Leasing-costs deriving from AQ Desktop outsourcing*
Energy consumption (1 yr)	2.400	1.245	285	90	*Elaborated by Consip using Energy Star data*
Paper consumption (1 yr)	3.000	3.000	3.000	3.000	*Hp: 5,000 sheet x person x Yr cost of a ream: 2,5 Euro*
LCC (1 yr)	9.600	7.163	4.523	4.726	*Leasing+energy+paper*
LCC (3 yrs)	28.800	21.489	13.569	14.178	*LCC for 120 workplaces*
LCC FA Desktop Outsourcing	15.041.400	10.779.087	6.161.727	6.516.774	*LCC for 70.000 workplaces*
LCC (1 yr) with double sided printing mode	8.100	5.663	3.023	3.226	*Paper consumption has been cut by 50%*
LCC (3 yrs) with double sided printing mode	24.300	16.989	9.069	9.678	
Net savings from double sided printing mode	4.500	4.500	4.500	4.500	
Savings in %	19%	26%	50%	46%	

Source: Consip S.p.A.

Challenges and risks

288. A basic and future challenge is the optimisation of workstations according to the different needs of the PBs; a rationalisation of the equipment and higher levels of quality and differentiation of service.

289. The true challenge is the dematerialisation through a new service culture: more services and less goods.

Key lessons learnt

290. Focusing the work on the provision of a service, rather than on supply of goods, was a key factor for successfully implementing the FA. The service allows for greater flexibility and economical and ecological efficacy and efficiency. The provision of service allows a preliminary assessment about the real needs of the public purchaser. The service, compared to the supply of products, includes technical support, maintenance and replacement of spare parts for all the equipment and a certain performance level. This gives to supplier a strong incentive to supply top products in terms of energy performance, durability and quality, with less CO2 emissions, less material use, no waste of electronic equipment (the products are not owned by public authorities but used) and increasing level of efficiency for end users.

291. For further information see: www.consip.it.

UNITED STATES

Context and background

292. Enforcement level: All United States Federal Government agencies use the Federal Procurement Data System (FPDS) to report on public procurements greater than $25,000. The 25 largest agencies are mandated to report and self-monitor quarterly, on which they are assessed semi-annually by an OMB scorecard; another 20-30 small agencies voluntarily comply and report.

293. The U.S. Federal Government occupies nearly 500,000 buildings, operates more than 600,000 vehicles, employs more than 1.8 million civilians, and purchases more than $500 billion per year in goods and services. For procurements, the U.S. government has established mandates for socio-economic goals such as purchasing from small businesses, firms that employ blind, deaf or otherwise handicapped individuals (Ability One), companies owned by Native Americans, women, and other diverse or socially disadvantaged groups, and green purchasing/sustainable acquisition.

Objectives

294. This case study focuses on the environmental acquisition efforts. Green purchasing/sustainable acquisition in the U.S. federal government dates to 1976, with passage of the first law establishing a preference program for recycled products—those made with recovered materials. There are statutory mandates from Congress, various Executive Order mandates (signed by the President of the United States) and implementation guidance to help agencies understand and meet the wide array of green purchasing mandates. The federal program now covers recycled content products, energy- and water-efficient products, biobased products, environmentally preferable products, alternative fuel vehicles, and reduction of toxic and hazardous materials. The Federal Government has been emphasizing sustainable acquisition or green procurement monitoring and reporting since the early 1990s and reports to Congress biennially on the results. The Federal Procurement Data System (FPDS) continues to be refined and improved as a tool to help agencies accurately report compliance with the sustainable acquisition mandates.

295. All of the sustainability mandates have also been incorporated into the Federal Acquisition Regulation (FAR) which covers all procurement requirements for federal purchases. For micropurchases that fall below the FPDS reporting threshold, FAR coverage still mandates sustainable acquisition compliance.

296. Three agencies have the lead in designating products and providing purchasing recommendations to the other agencies: U.S. Environmental Protection Agency, U.S. Department of Energy, and U.S. Department of Agriculture. These three agencies have designated more than 300 products. Visit www.sftool.gov/greenprocurement to see the full list and the recommendations.

297. Agencies purchase products through procurement platforms such as GSA Advantage or the Defense Logistics Agency's Emall. In addition, agencies issue their own contracts or task or delivery orders against established contracts such as GSA's multiple award schedule contracts. Agencies can specify which green products they want to purchase and define what it means for these products to be "green" in scopes of work or by the inclusion of clauses or by reference to the environmental programs. For example, an agency purchasing recycled content paper could specify (1) recycled content paper, (2) paper containing X% postconsumer fiber, or (3) paper meeting the EPA Comprehensive Procurement Guidelines.

Implementation

298. Compliance with the sustainable acquisition goals and mandates ultimately contribute to the overall success of the U.S. Government’s goal to reduce greenhouse gas (GHG) emissions, contribute to

energy and water efficiency goals, reduce the government's petroleum use, and create and support markets for recovered and biobased materials. The Executive Order 13514 goals are:

- By 2020, the Federal Government will reduce Scope 1 & 2 Greenhouse Gas emissions by 28 percent as compared to its 2008 baseline.
- By 2020, the Federal Government will reduce identified Scope 3 greenhouse gas emissions, by 13 percent as compared to its 2008 baseline.
- By 2015, the Federal Government will reduce its energy intensity in goal-subject facilities by 30 percent as compared to its 2003 baseline.
- By 2020, the Federal Government will reduce its potable water intensity by 26 percent as compared to its 2007 baseline.
- By 2015, the Federal Government will reduce its fleet petroleum use by 20% as compared to its 2005 baseline.

299. More specifically, Executive Order 13514 Section 2(h) reinforces compliance with all of the sustainable acquisition standards and mandates that "…the head of each (federal) agency shall: …ensure that 95 percent of new contract actions…are energy-efficient (Energy Star or Federal Energy Management Program (FEMP) designated), water-efficient, biobased, environmentally preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT) certified), non-ozone depleting, contain recycled content, or are non-toxic or less toxic alternatives…."(signed by President Obama on October 9, 2010).

300. Currently, sustainable acquisition requirements apply to products, including product supplied or used as part of services contracts. They are defined as being relevant to the following purchase categories:

- Design and/or Construction
- Operations & Maintenance
- Janitorial Products/Services
- Office Supplies
- Furniture
- Cafeteriaware/Services
- Fleet Management
- Hospitality: Uniforms/ Bedding/Linens
- Meetings & Conference Services
- IT Equipment

301. The product category specific mandates are available in a searchable tool at http://sftool.gov/GreenProcurement. Referenced standards include:

- Recycled Content (1976) www.epa.gov/cpg/products.htm
- Energy Star/Efficient (1993) www.energystar.gov and www.eere.energy.gov/femp/procurement/
- Non-ozone depleting substances (1998) www.epa.gov/ozone/snap/general/index.html
- Biobased/Biopreferred (2002) http://www.biopreferred.gov/
- Toxic and hazardous chemicals (2007) (in the future may link to the EPA DfE Safer Chemicals Ingredients List) http://www.epa.gov/dfe/saferingredients.htm
- Water Efficient/WaterSense (2007) www.epa.gov/watersense
- Environmentally Preferable (1993) www.epa.gov/epp
- High Performance, Green Buildings (2007) http://www.wbdg.org/references/fhpsb_new.php
- Other (renewables & AFVs) www.eere.energy.gov/EE/transportation.html

302. On November 20, 2013 EPA released for public comment draft Guidelines for assessing private sector standards and ecolabels. If implemented, the US EPA envisions that conforming private sector standards could be utilized more consistently by federal agencies, augmenting the above list of primarily government standards and ecolabels to help meet the goals of EO 13514 section 2(h). Such an approach would be consistent with the National Technology Transfer and Advancement Act which directs federal agencies to use private sector consensus standards instead of government-unique standards in procurement and regulations, unless otherwise impracticable. For more information see www.epa.gov/epp/draftGuidelines.

Impacts and monitoring

303. U.S. Federal agency compliance is monitored through a variety of mechanisms. In addition to the FPDS data system where all procurement information is tracked, agencies are expected to submit an annual Strategic Sustainability Performance Plan, which identifies specific actions and goals they plan to achieve in the coming year. In addition, key milestones and activities are tracked and assessed through semi-annual scorecards.

304. These scorecards are used by OMB and CEQ to monitor whether individual agencies are staying on track toward achieving the overarching government-wide goals and how much progress agencies are making to achieve the activities and milestones identified in their annual plans or as prescribed by OMB and CEQ for all agencies. In providing input on sustainable acquisition for the scorecard assessments, agencies are asked to conduct quarterly reviews of at least five percent of acquisitions awarded in that period, and report on compliance with the sustainable acquisition goals. If agencies fall below the 95% compliance rate, they are supposed to identify corrective actions that they will take during the following six month period to address the barriers or underlying conditions for non-compliance.

Challenges and risks

305. During the last few assessment periods, many agencies focused on improving the quality of sustainable acquisition data submitted to the FPDS. Although agencies are including the requirements and contract clauses necessary to purchase the designated green products, they may not be accurately reflecting their sustainable acquisition purchases in the FPDS. In addition, agencies will identify particular areas of

emphasis—for example review of all recent design and construction contracts, for requirements and compliance with applicable requirements. Agencies are also beginning to baseline their performance for individual requirements, such as for bio-based products or EPEAT-registered electronics. Currently, we are using FPDS data a backup for checking compliance but once the quality of data improves, it may become the main reporting tool for biannual assessments through the public scorecard process.

306. There are a number of incentives beyond the public scorecards to promote implementation. Since the 1990s, Presidential awards have been given to federal agency teams and individuals that exemplify leadership in sustainable procurement.

Human and economic resources

307. Senior Sustainability Officers within individual agencies determine their own needs and are expected to provide staffing for their agency-level sustainable acquisition programs.

Summary of results

See http://sustainability.performance.gov/.

Key lessons learnt

308. The U.S. federal government does not have a single, unified green purchasing law or unified procurement system. Because we have hundreds of thousands of buying points across multiple agencies, without one unified law or purchasing system, it is very difficult for U.S. federal government agencies to obtain accurate information and track which green products they purchase. In addition, because many items are purchased as part of services contracts -- and product-level data is not usually tracked under these contracts -- tracking and reporting is even more difficult.

309. The U.S. federal government is developing new and improved ways to integrate green products into acquisition systems. Some agencies have found innovative ways to lead. For example, in addition to reporting per E.O. 13514 goals and mandates, the Department of Energy's GreenBuy Program provides DOE sites with additional recognition for reporting on purchases of specific "Priority Products." DOE developed the list of Priority Products, which includes 40 products in 7 categories, in order to identify products that go beyond minimum compliance and embody leadership-level sustainability attributes. The Priority Products list provides DOE sites with optional stretch goals they can use to help focus their sustainable acquisition efforts. Sites can tailor this list to meet their specific circumstances, allowing them to select categories and products of most value at the local level. Facilities may report additional green products and are encouraged to nominate new candidates for the list. This list also assists sites in engaging with the vendor community and informing contract language and related reviews. The recognition program provides significant incentives to report on a voluntary basis for a smaller number of products in order to reward effective procurement programs.

AUSTRIA

Context

310. In July 2010 the Austrian federal government adopted a horizontal action plan for sustainable procurement ("naBe-Aktionsplan") and started its implementation.

- It points out the importance of changing production and consumption schemes towards sustainable activities;
- It shows the public sector's opportunities to influence this process;
- And it offers practical orientation for public purchasers to design their procurement procedures in this respect.

Objectives

311. Given that Austria's annual procurement expenditure covers app. 17 % of Austrian GDP the public sector should contribute to sustainable economic development by the strategic use of public procurement. In this context, the efficient and economical use of natural resources is one of the most important conditions. Sustainable procurement means preferring products and services with the lowest ecological and social impact while respecting the criteria of economic expediency.

Implementation Process

312. The action plan contains ecological criteria for 16 specific procurement categories. They must be used by the Federal Procurement Agency (Bundesbeschaffung GmbH, BBG), the public sector's largest central purchasing body in Austria, per instruction of the Ministry of Finance.

313. BBG tries to actively contribute to the target to reduce greenhouse emissions, which are generated by the public sector's energy consumption by purchasing electricity from renewable resources. The share of renewable energy sources in the demanded product mix increased from 40% in 2005 to 100% in 2010, the share of certified green electricity increased from 0% in 2005 to 3% in 2010.

Impact and Monitoring

314. In this context monitoring plays an essential role. The Federal Ministry for the Environment in cooperation with the BBG therefore assigned a study to the Austrian Environment Agency to analyse the impact of using ecologically sound procurement criteria for energy on greenhouse emissions during 2005 and 2010. The study was focussed on energy procurement based on the action plan of the Austrian federal ministries and their services by using a computer assisted model (GEMIS-Austria).

315. The calculation of greenhouse emissions on the basis of the mentioned product mix shows that greenhouse emissions caused by the electricity consumption of the respective public services decreased although electricity consumption has generally risen by 92% during 2005 and 2010.

Challenges and Risks

316. The project serves as an important role model for purchasing electricity, which is verified by the calculation methodology applied in the mentioned study of the Austrian Environment Agency. It is now important to present this example in public to generate a broad effect.

317. However, there is potential for the future, e.g. in building facilities, which are able to provide certified green electricity. Based on research a specific scenario "Zertifizierter Ökostrom bis 2015" (certified electricity until 2015) estimates the available potential as continuously increasing.

318. According to the relevant assumptions BBG has the option to increase the procurement of green electricity from 3% in 2010 to 11% in 2015. To enforce this potential the Ministry for Environment has to to make the benefits visible to the other federal ministries.

319. It is presumed that increasing the procurement of certified (with eco labels) green electricity would lead to the development of facilities for renewable energy sources in the long run, because the construction of new or modernized facilities is a requirement for green electricity. Consequently, enlarged possibilities to offer green electricity should lead to further reduction of greenhouse emissions.

Key Lessons Learned

320. Prognoses suggest that the consumption of electricity will increase on short-term. The transposition of measures to stabilize and reduce electricity consumption should therefore be a priority. A decoupling of the purchased quantity of electricity and thereby caused greenhouse emissions seems possible under the condition that the availability of electricity from renewable sources increases. Legislative requirements and general economic conditions are essential factors for developing facilities for green electricity, which can provide sufficient quantities.

321. BBG's initiatives in the field of sustainable procurement in cooperation with the Ministry for Environment have contributed to raising awareness in the federal ministries and their services for efficient and economical use of resources. The first important steps were taken by procurement of electricity, which were analysed in a study.

322. Summing up, in can be said that procurement of green electricity should be continued. Increased demand of certified green electricity needs to be promoted by the Ministry for Environment. The stabilization and reduction of electricity consumption of the public sector is the most effective measure to sustainably reduce greenhouse emissions and should therefore be seen as a common task.

323. For further information see: http://www.nachhaltigebeschaffung.at