



Renewing the IT equipment of the city of Helsinki with low-carbon solutions

Procurement Centre, Helsinki, Finland

- 27 % energy savings and cost savings of 288,000 EUR over the estimated lifetime of the product
- A model for fast IT renewal processes achieving remarkable energy savings

Image source: photograph by Mikko-Paavola, Modified by Majestic and Ilmari Karonen

Last tender from 2012 = benchmark

- standard technology
- 2,526 t CO₂ emissions per lifetime
- Energy consumption 1,222 TOE

GPP 2020 tender

- new technology
- 1,833 t CO₂ emissions lifetime
- Energy consumption 887 TOE

Results

- Energy savings 27 % per lifetime (335 toe)
- Cost savings 288,000 € per lifetime
- 693 t CO₂ savings per lifetime

Introduction

The City of Helsinki's Procurement Centre acts as central purchasing unit and manages framework agreements. However ordering is taking place directly by the 34 different departments of the city.

Larger departments such as education and healthcare and public utilities have their own full-time personnel in procurement. In small and medium-sized departments and public utilities procurement and tendering are carried out among other tasks.

Procurement i.e. internal and external purchases of services, goods and materials were about 40 % of the City expenditure. The volume of the city departments and public utilities without Public Works Department, Stara and Helen, Port of Helsinki and HKL (Helsinki City transport) was about 2,2 billion euros in 2013.

Helsinki joined the GPP 2020 project as associate partner in 2014.

- This GPP2020 tender model is based on a tender for IT-equipment and services tendered by the City of Helsinki's Procurement Centre
- It is estimated that 7,000 computers, 2,000 laptops and 2,000 monitors are purchased each year.
- The tender was divided into five lots – Lot 1: basic model; Lot 2: power model; Lot 3: Basic laptop, Lot 4: Ultrabook, Lot 5: Monitor. All including services.
- The framework contract was made with three operators/ suppliers and consisted of a 24 months lease to purchase contract, with possible two times 12 months extension.
- The estimated total cost of the contract is 50,000,000 € (excluding VAT).

Procurement approach

Procurement was conducted using the open procedure, by publishing the tender on 17th of October 2014 with offers to be made by 6th November 2014.

The environmental technical specifications and compulsory criteria were as follows:

To Lot1-Lot 5	
<p>Technical specifications</p> <ul style="list-style-type: none"> - All equipment must comply with the WEEE directive (2002/95/EC) - All equipment must comply with RoHS directive (2002/95/EC) - All served equipment's has to reach at least the latest EnergyStar level. - Long lifecycle products (minimum 12 months after market launch) <p>Verification: All information available in</p>	<p>Award criteria (Environmental: 6/100)</p> <ul style="list-style-type: none"> - Three year onsite warranty - Power usage on use and idle face lower than Energy Star - List of all environmental certificates - Description of the recycling process

product documentation	
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Contract clauses

Repair and maintenance: warrantee of compliance for the following environmental aspects:

- Hazardous waste WEEE clausal
- RoHS clausal
- In the final contract parties are engaged to work towards better environmental contribution. During the contract period parties are agreed to develop environmental issues.

Criteria development

Environmental criteria – development was on based sound market practices. Market dialogue activities pushed the ambition level of the criteria. The GPP 2020 calculator for office ICT equipment was partly used throughout the tendering process.



Results

The results are calculated using GPP 2020 calculator for office ICT equipment. The lifetime for basic computers is estimated to five years and for laptops four years. Estimations are based on estimated yearly volumes for 7,000 basic computers and 2,000 laptops and 2,000 monitors and a total volume of 28,000 computers, 8,000 laptops and 8,000 monitors (probably a 4-years-contract).

The data on the last tender figures is from 2012's IT-equipment and services tender. During the whole lifecycle the reduction of CO₂-emissions (t CO₂/lifetime) exceeds 693 tonnes when compared to the hardware based on previous procurement contract made in 2012. Yearly savings are shown in the below mentioned tables.

Standard (basic) computer

	CO ₂ emissions (t CO _{2e} /year)	Energy consumption (toe/year)
Low Carbon Solution	292	141
Last Tender (2012)	388	188
Savings	96 t CO_{2e}/year	47 toe/year

Notebook (laptop)

	CO ₂ emissions (t CO _{2e} /year)	Energy consumption (toe/year)
Low Carbon Solution	41	20

Last Tender (2012)	82	40
Savings	41 t CO ₂ e/year	20 toe/year

Computer monitor

	CO ₂ emissions (t CO ₂ e/year)	Energy consumption (toe/year)
Low Carbon Solution	52	25
Last Tender (2012)	64	31
Savings	12 t CO ₂ e/year	6 toe/year



Calculation basis

New basic model computer power consumption is the following (Benchmark results are 2012 tender values):

	BENCHMARK	LOW CARBON SOLUTION
Idle wattage (W)	47	34,4
Sleep wattage (W)	1,7	2,27
Off wattage (W)	0,7	0,40

New laptop power consumption is the following:

	BENCHMARK	LOW CARBON SOLUTION
Idle wattage (W)	9,47	4,62
Sleep wattage (W)	1,17	0,63
Off wattage (W)	0,71	0,63

Monitor power consumption is the following:

	BENCHMARK	LOW CARBON SOLUTION
Active wattage (W)	20,7	17,16
Sleep wattage (W)	0,34	0,16
Off wattage (W)	0	0

From above mentioned calculation baseline figures we can see that the market is taking the power consumption reduction more and more into consideration. Total lifetime cost savings for electricity are estimated to be 288,000 € and the percentage of savings (energy and CO₂-emissions in %) is estimated to be 27,4 %. Total Electricity savings are estimated to be 3.9 Mio kWh/lifetime. The energy savings for these products compared to the benchmark are estimated to be 335 TOE/lifetime.

Lessons learned

The City of Helsinki's Procurement Centre long term goal is to have the environmental perspective and sustainability taken into account in all procurement of the City. This procurement case shows that Helsinki is on the right way.

According to our environmental policy the material and ecological efficiency of the city's departments should be significantly improved in the future, and these mentioned factors will be considered in all investments, procurement and notable projects by 2050. All city departments and subsidiaries will be trained to make sustainable procurements by 2020.

The way GPP and SPP aspects are implemented differs from one procurement project to another, but the goal remains to be ambitious.

It is very important to change the way people think in planning and developing public service production. Purely making the consideration of sustainability aspects an integral part of the way we work will lead to better results.

Along with large and distinct GPP and SPP projects green and sustainable public procurement often means quite small and even mundane issues in procurement processes. By e.g. adding the accessibility of sustainable products in categories and selections we can ensure a steady shift towards more sustainable operation of the City.

Contact

For more information about this GPP 2020 Tender Model, please contact:

Lasse Huusko lasse.huusko@hel.fi

Perttu Pohjonen perttu.pohjonen@hel.fi



About GPP 2020



GPP 2020 aims to mainstream low-carbon procurement across Europe in support of the EU's goals to achieve a 20% reduction in greenhouse gas emissions, a 20% increase in the share of renewable energy and a 20% increase in energy efficiency by 2020.

To this end, GPP 2020 will implement more than 100 low-carbon tenders, which will directly result in substantial CO₂ savings. Moreover, GPP 2020 is running a capacity building programme that includes trainings and exchange. – www.gpp2020.eu

About PRIMES



Across six countries in Europe; Denmark, Sweden, Latvia, Croatia, France and Italy, PRIMES project seeks to help municipalities overcome barriers in GPP processes, many of which lack capacity and knowledge.

PRIMES aims to develop basic skills and provide hands-on support for public purchasing organisations in order to overcome barriers and implement Green Public Purchasing. This will consequently result in energy savings and CO₂ reductions. – www.primes-eu.net



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