



Supply of energy efficient printers

Republic of Slovenia, Ministry of Finance

- Contract covers 49 contracting authorities
- Replacement with energy efficient solutions (more than 3,600 units)



Foto: dreamstime.com / Vladimir Yudin

Last tender = benchmark

- 1.002.858 kWh electricity/year
- 346,0 t CO₂/year

GPP 2020 tender

- 683.202 kWh electricity/year
- 235,7 t CO₂/year

Results

- 27,5 toe/year (137,5 toe in total)
- 110,3 t CO₂/year (551,4 t CO₂ in total)

Contract tendered

- Three year framework agreement for the supply of energy efficient printers.
- Common public tender, published by the Public Procurement Directorate of the Ministry of Finance, Slovenia, in October 2013.
- Contract to cover 49 contracting authorities. Contracting authorities are Ministries, constituent bodies of the Government, Government offices, individual local self-government and public institutions that have authorized Ministry of Finance to execute the tender on their behalf. The contract was divided into 14 sections with 3.870 units.
- The Ministry of Finance entered into a three year general framework agreement with all tenderers that have filed complete bids. Individual contracting authorities enter individual framework agreements with all tenderers that are part of a general framework agreement.
- For an individual order, individual contracting authority initially calls the first candidate from the list of candidates in individual section. In case that initially called candidate in the appointed time reports to the individual contracting authority, that he can not supply the printers, individual contracting authority then calls the next candidate from the list to do so.
- Reopening competition will be executed after every 8 to 12 months. After each executed reopening a new list of candidates, based on the lowest price criteria, will be made for individual section.

Procurement approach

Type of procurement procedure: Open procedure

Subject matter: Supply of energy efficient printers

Specifications:

- All printers with printing speed exceeding 45 pages per minute for A4 format paper, must be equipped with a function of automatic duplex print. All other devices with lower printing speed must have an option of duplex printing either set manually or within the programme.
- Offered models of printers must fulfil the latest ENERGY STAR standards of energy efficiency, valid on the day of tender notice (that was ENERGY STAR v 1.2).

Award criteria: Lowest price.

Contract clauses: Upon delivery of device to the individual contracting authority, the supplier will also have to provide an instruction book on lowering energy consumption in Slovenian language. Instructions must include at least:

- Information on factors that include energy consumption, consumption of toners, expendable supplies and materials, paper (e.g. standby and hibernation settings, print, copy and scan settings, etc.) and ways to save energy, related to those factors.
- Instructions on how to adjust settings that effect energy consumption and consumption of toners, paper and expendable supplies and materials (e.g. standby settings, duplex copy and print settings and imposition settings, as well as toner efficiency settings)
- Warnings on how even in standby and hibernation modes, device still consumes energy and that in is best to shut down the device in case of longer disuse.

Market response: In 14 sections the contracting authority received bids of eight different bidders that filed bids for different sections.

| Lot | Estimated quantity of printers | Nr. of received bids | Nr. of complete bids |
|--|--------------------------------|----------------------|----------------------|
| Lot 1: Economic laser printer A4 – monochrome | 661 | 8 | 7 |
| Lot 2: Standard laser printer A4 - monochrome | 1.731 | 8 | 8 |
| Lot 3: High performance laser printer A4 - monochrome | 509 | 8 | 6 |
| Lot 4: Colour laser printer A4 | 172 | 7 | 2 |
| Lot 5: High performance colour laser printer A4 | 47 | 7 | 2 |
| Lot 6: High performance network laser printer A3/ A4- monochrome | 227 | 8 | 6 |
| Lot 7: High performance network laser printer A3/ A4-colour | 64 | 8 | 3 |
| Lot 8: Desktop dot-matrix printer A4-flatbed | 35 | 1 | 1 |
| Lot 9: Desktop dot-matrix printer A4-passbook | 31 | 1 | 1 |
| Lot 10: Portable inkjet printer A4-colour | 153 | 5 | 5 |
| Lot 11: POS printer (impact) | 37 | 1 | 1 |
| Lot 12: POS printer (thermal) | 30 | 1 | 1 |
| Lot 13: Colour inkjet printer | 61 | 5 | 5 |
| Lot 14: Desktop inkjet printer A4 – colour | 112 | 1 | 1 |

Lots 8, 9, 11 and 12 were excluded from the calculation of savings, since data for these type of printers are not included in the calculator.

Criteria development

This tender follows requirements included in the Decree on Green Public Procurement (<http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED5194>).



Results

An approximate amount of 3,870 printers were purchased. Based on the date of the office-ICT-calculator reduction were calculated for Ink-jet and Laser (monochrome and colour) printers (approximately 3.691 printers). Our estimate is that devices will be used at least five years.

| Low Carbon Solution | CO ₂ emissions |
|-------------------------|-------------------------------------|
| GPP 2020 tender | 235,70 t CO ₂ /year |
| Last tender (benchmark) | 345,98 t CO ₂ /year |
| Savings | 110,28 t CO₂/year |

| Electricity consumption | Electricity consumption |
|-------------------------|--|
| GPP 2020 tender | 683.202 kWh/year |
| Last tender (benchmark) | 1.002.858 kWh/year |
| Savings | 319.656 kWh/year (27,49 toe/year) |



Calculation basis

Calculation is based on the office-ICT-calculator of GPP 2020 (version 19.5.2014). Data inputs for the GPP 2020 tender are supplied by the Public Procurement Directorate of the Ministry of Finance. 3.192 laser monochrome printers, 326 laser color printers and 173 ink jet printers were purchased, together 3.691 printers. Data for annual electricity consumptions were taken from the calculator. Compared to last tender (=ENERGY STAR) savings of electricity and CO₂ emissions were calculated, on the following basis:

Laser Monochrome - Electricity:

Last tender: 284 kWh (value taken from the calculator) / printer / year * 3192 printers purchased = 906.528 kWh / year

Low carbon solution: 200 kWh (value taken from the calculator) / printer / year * 3192 printers purchased = 638.400 kWh / year

From which follows: 906,528 – 638.400 = savings of 268.128 kWh / year

Laser Monochrome - CO₂ emissions:

Last tender: 906.528 kWh / year * 0,345 (CO₂ emissions / kWh for Slovenia) = 312.752,16 kg / year

Low carbon solution: $638.400 \text{ kWh / year} * 0,345 \text{ (CO}_2 \text{ emissions / kWh for Slovenia)} = 220.248 \text{ kg / year}$

From which follows: $312.752,16 - 220.248 = 92.504,16 \text{ kg CO}_2 \text{ / year}$

Color - Electricity:

Last tender: $287 \text{ kWh (value taken from the calculator) / printer / year} * 326 \text{ printers purchased} = 93.562 \text{ kWh / year}$

Low carbon solution: $130 \text{ kWh (value taken from the calculator) / printer / year} * 326 \text{ printers purchased} = 42.380 \text{ kWh / year}$

From which follows: $93.562 - 42.380 = \text{savings of } 51.182 \text{ kWh / year}$

Color - CO₂ emissions:

Last tender: $93.562 \text{ kWh / year} * 0,345 \text{ (CO}_2 \text{ emissions / kWh for Slovenia)} = 32.278,89 \text{ kg / year}$

Low carbon solution: $42.380 \text{ kWh / year} * 0,345 \text{ (CO}_2 \text{ emissions / kWh for Slovenia)} = 14.621,10 \text{ kg / year}$

From which follows: $32.278,89 - 14.621,10 = 17.657,79 \text{ kg CO}_2 \text{ / year}$

Ink Jet - Electricity:

Last tender: $16 \text{ kWh (value taken from the calculator) / printer / year} * 173 \text{ printers purchased} = 2.768 \text{ kWh / year}$

Low carbon solution: $14 \text{ kWh (value taken from the calculator) / printer / year} * 173 \text{ printers purchased} = 2.422 \text{ kWh / year}$

From which follows: $2.768 - 2.422 = \text{savings of } 346 \text{ kWh / year}$

Ink Jet - CO₂ emissions:

Last tender: $2.768 \text{ kWh / year} * 0,345 \text{ (CO}_2 \text{ emissions / kWh for Slovenia)} = 954,96 \text{ kg / year}$

Low carbon solution: $2.422 \text{ kWh / year} * 0,345 \text{ (CO}_2 \text{ emissions / kWh for Slovenia)} = 835,59 \text{ kg / year}$

From which follows: $954,96 - 835,59 = 119,37 \text{ kg CO}_2 \text{ / year}$

Electricity savings (in total): $268.128 + 51.182 + 346 = 319.656 \text{ kWh / year}$

CO₂ savings (in total): $92.504,16 + 17.657,79 + 119,37 = 110.281,32 \text{ kg CO}_2 \text{ / year}$



Lessons learned

In the field of IT equipment we demanded the supply of new equipment in accordance with the ENERGY STAR standard that has not been updated for a long time. The majority of producers of IT equipment label their products with ENERGY STAR.

In the field of IT equipment we will have to perfect our knowledge of different voluntary labels, used for labelling product energy efficiency, which will enable us to do a better market analysis and define more ambitious demands on energy efficiency within future tendering processes.

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Tender accessible at: www.djn.mf.gov.si/javna-narocila/arhiv-javnih-narocil

