Framework contract to purchase thin client computer systems

Procurement Agency of the Federal Ministry of the Interior (Germany)

**Background**

The Procurement Agency of the Federal Ministry of the Interior (BeschA) provides a centralised procurement function for German state ministries and agencies, covering a number of product and service categories. For every tender, BeschA aims to procure in the most sustainable way possible.

In 2012, the Competence Centre for Sustainable Procurement was launched by BeschA. The centre supports procurers across Germany in implementing sustainability aspects in public procurement.

**Procurement objectives**

A two year framework agreement for thin client systems was published in August 2013 by BeschA using an open public procurement procedure. The requirements were based on a comprehensive needs assessment that was undertaken prior to publication. The 67 authorities intending to call-off from the framework agreement determined a total demand of approximately 15 million euro. Based on the needs identified, the technical requirements for two thin client systems for standard desktop applications were derived, so that these were tailored to the needs of future users.

The framework agreement was for approximately 50,000 thin client computer systems (30,000 smart-thin-clients and 20,000 thin-clients) and connected services to replace old and inefficient desktop computers (PCs) in several federal government agencies in Germany.

**Criteria used**

This tender was set up following the guidelines and recommendations provided for the procurement of environmentally friendly thin clients, developed by Germany’s Digital Association (BITKOM), the German Federal Environment Agency and BeschA (version 2.0 and the UfAB V Version 2.0).

**Subject matter of the contract:** Framework contract for thin clients.

**Technical specifications:**

- Energy-efficient power adaptor (efficiency >85%).
- Smart-thin-client systems: Idle mode maximum 12 watts.
- Full-thin-client systems: Idle mode maximum 15 watts

Both systems:

- Sleep mode = Soft off (e.g. ACPI S5) maximum 2 watts.
- Sleep mode = Soft off (e.g. ACPI S5) including Wake-on-LAN (WOL) maximum 2.7 watts

**Award criteria:** The contract was awarded on the basis of the lowest price (as recommended in the guidelines of UfAB V Version 2.0 [in German]).

**Contract performance clauses:** Repair and maintenance - warrantee of compliance for the following environmental aspects:

- All components must be labelled with the CE-mark.
Results

Six bids were submitted for consideration; the framework contract was awarded to a single supplier.

Energy savings and CO₂ emission reductions were calculated based on the EU-funded GPP 2020 project methodology for a life span of five years. The results are the following:

<table>
<thead>
<tr>
<th></th>
<th>Smart-thin-client systems</th>
<th>Thin-client systems</th>
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</thead>
<tbody>
<tr>
<td>Idle mode max.</td>
<td>9.06 Watts (25% below technical specifications in the tender)</td>
<td>12.42 Watts (17% below technical specifications in the tender)</td>
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<tr>
<td>Electricity savings (kWh)</td>
<td>58,750,000 kWh energy savings</td>
<td></td>
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<tr>
<td>Reduction of CO₂-Emissions (kg)</td>
<td>29,500,000 kg CO₂ savings</td>
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Environmental impacts

According to the Energy Star website, most studies report that for an office desktop computer (PC) primary energy consumption during use is more than three to four times higher than the primary energy needed for manufacturing and materials production, whilst the energy costs/credits of waste disposal and recycling are negligible (<15% of production energy). This is the result for a typical office PC, used eight hours a day (including Standby) over 260 days. In the most recent version of the Energy Star requirements (version 5.0) products must meet stringent total energy consumption (TEC) requirements for estimated annual energy consumption. Small-scale servers and thin clients must meet energy use guidelines in ‘off’ and ‘idle’ modes of operation, and thin clients supporting sleep functions must meet requirements in this mode as well. These requirements ensure energy savings when computers are being used and performing a range of tasks, as well as when they are turned off or into a low power mode.

Lessons learned

- The market for thin-client computer systems offers more energy-efficient products than demanded in the technical specifications (see table in the results section above).
- In future, more ambitious criteria regarding performance in terms of energy efficiency could be considered as an award criterion.

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For related information, please see European GPP criteria for Office IT Equipment (currently under revision) and the Technical Background Report. This GPP Example was previously published through the GPP 2020 project, see http://www.gpp2020.eu/fileadmin/files/Tender_Models/GPP_2020_BeschA_Tender_Model_Thin_Clients.pdf.