Computer and Monitors

**Definition:**

The criteria encompass computers and display devices. These include stationary computers, desktop computers, workstations, computer monitors, notebook computers, two in one notebook, tablet computers, portable all in one computer, mobile thin client.

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| **List of product items:** |
| **1** | Computer and Monitors |

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| **Computer and Monitors** |
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| **1.1** | **Subject Matter (suggestion on how to draft the tender title)** |
|  | Purchase of energy efficient *[PCs/notebooks/monitors/tablets/workstations].* |
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| **1.2** | **Technical Specification (to be included in the terms of reference / technical specifications)** |
|  | **Minimum Energy performance for computers**Applicable to stationary and mobile computers. The calculated Typical Energy Consumption (ETEC) for each piece of equipment delivered as part of the contract must be less than or equal to the Maximum ETEC requirement. |
|  |  **Verification:** | Tenderers must report the Typical Energy Consumption (ETEC) value, based on testing and calculations according to the IEC standard 62623:2012. Products holding a relevant Type I Ecolabel or a label from another labelling scheme fulfilling the specified requirements will be deemed to comply. Alternative test results obtained by accredited ISO17025 test bodies according to the IEC 62623:2012 standard are accepted as proof of compliance. |
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|  | **Minimum energy performance for monitors**Applicable to computer displays. The Energy Efficiency Index for each model delivered as part of the contract must be in the range of Energy Classes A-D as set out in Annex I of Commission Delegated Regulation (EU) No 2019/20134. |
|  |  **Verification:** | For each model delivered, the tenderer must provide the valid Energy Label issued according to the EU’s Energy Labelling framework Regulation (2017/1369). Products labelled as Class A, B, C or D will be deemed to comply. |
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|  | **Warranty and service agreements**The tenderer shall provide a minimum two-year warranty effective from delivery of the product. This warranty shall cover repair or replacement and include a service agreement with options for pick-up and return or on-site repairs. The warranty shall guarantee that the products are in conformity with the contract specifications at no additional cost. This shall cover battery defects. |
|  | **Verification**: | The tenderer shall provide a written declaration that the products supplied will be warrantied in confor- mity with the contract specifications and service requirements. |
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|  | **Reparability and replacement of components and parts****a) Continued availability of spare parts**The tenderer shall guarantee the availability of spare parts, including as a minimum those identified in criterion relating to the Design for reparability, for at least three years from the date of purchase. |
|  | **Verification**: | The tenderer shall provide a declaration that compatible spare parts, including rechargeable batteries (if applicable), will be made available to the contracting authority or through a service provider. Equipment holding the EU Ecolabel or another relevant Type I Eco-label fulfilling the specified requirements will be deemed to comply. |
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|  | **b) Design for reparability**The following parts, if applicable, shall be easily accessible and replaceable by the use of universally available tools (i.e. screwdriver, spatula, plier or tweezers):Computers1. HDD/SSD,
2. Memory,
3. Rechargeable battery,

Displays (***not applicable for computers***)1. Screen assembly and LCD backlight
2. Power and control circuit boards
3. Stands (excluding those integrated with the enclosure)

The tenderer shall provide clear disassembly and repair instructions (e.g. hard or electronic copy, video) to enable a non-destructive disassembly of products for the purpose of replacing key components or parts for upgrades or repairs. This shall be made available in hard copy or via the manufacturer’s webpage. |
|  | **Verification:** | A manual shall be provided by the tenderer, which shall include an exploded diagram of the device illustrating the parts that can be accessed and replaced, and the tools required. It shall also be confirmed which parts are covered by service agreements under the warranty.Equipment holding the EU Ecolabel or another relevant Type I Eco-label fulfilling the specified requirements will be deemed to comply. |
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|  | **Ease of replacement for rechargeable batteries (only applicable to notebooks and laptops)**Rechargeable batteries shall not be glued or soldered into portable products. It shall be possible for a professional user or repair service provider to replace the rechargeable battery. Instructions on how the rechargeable battery packs are to be removed shall be provided in the user instructions or via the manufacturer’s webpage. |
|  | **Verification**: | The tenderer shall illustrate how the battery is installed in the product, the steps required to remove and cover markings. A copy of relevant user instructions shall also be provided.The Contracting Authority reserves the right to request a visual inspection of a random selection of the supplied products. Equipment holding the EU Ecolabel or another relevant Type I Eco-label fulfilling the specified requirements will be deemed to comply. |
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| **1.3** | **Award Criteria (to be considered when BPQR is utilised)** |
|  | **Improvement in the energy consumption above the specified threshold for computers**It is recommended to use this criterion in conjunction with criterion TS18 for desktop computers if the products are for graphic-intensive use.Points will be awarded if the product is more energy-efficient than the ETEC\_MAX value required under criterion TS18.A maximum of x points **[to be specified]** may be awarded. Points must be awarded in proportion to the improvement in energy efficiency as follows:• Over 60% lower: x points• 40-59% lower: 0.75x points• 25-39% lower: 0.50x points• 15-24% lower: 0.25x points |

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|  | **Verification:** | Tenderers must report the Typical Energy Consumption (ETEC) value, based on testing and calculations according to the IEC Standard 62623:2012. Typical Energy Consumption reported by a valid Energy Star Certificate can be used as proof of compliance. |
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|  | **Cost competitiveness of spare parts.**The tenderer shall provide a price list for, as a minimum, the following component parts:For the component parts listed above indicative labour costs for replacements carried out by the tenderer’s authorised service providers shall be provided. Points shall be awarded according to the most cost competitive offers. Additional component parts, if considered important to the price comparison, should be added to the list provided. |
|  | **Verification**: | The tenderer shall provide a price list for original or compatible spare parts and indicative labour costs for their replacement, including rechargeable batteries (if applicable). |
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|  | **Longer warranties and services agreements**Additional points shall be awarded to each additional year of warranty and service agreement offered that is more than the minimum technical specification. This shall be awarded A maximum of x points **[to be specified]** may be awarded.+4 years or more: x points+3 years : 0.75x points+2 years : 0.5x points+1 years : 0.25x points |
|  | **Verification**: | A copy of the warranty and service agreement shall be provided by the tenderer. They shall provide a declaration that they cover the conformity of the goods with the contract specifications. |
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|  | **Rechargeable battery life and endurance.**Points shall be awarded for improved endurance greater than 300 cycles (with 80% capacity retention) respectively. A maximum of x points [**to be specified**] may be awarded.1000 cycles or more: x points 800 cycles or more : 0.75x points 500 cycles or more : 0.5x points Up to 499 cycles : 0.25x pointsThe minimum battery life in hours shall be set according to the Contracting Authority’s requirements. |
|  | **Verification**: | The tenderer shall provide a test report for the battery cells or packs showing compliance according to the IEC EN 61960 ‘endurance in cycles’ test carried out at 25oC and at a rate of either 0.2 It A or 0.5 It A (accelerated test procedure).Partial charging may be used to comply as long as the software is factory-installed as the default setting and the tender requirements on battery life are met at the partial changing level complying with the cycle requirement.Equipment holding the EU Ecolabel or another relevant Type I Eco-label fulfilling the specified requirements will be deemed to comply. |