



Beschaffungsamt  
des Bundesministeriums  
des Innern

# Thin Client Systems

Sustainability



[www.beschaffungsamt.de](http://www.beschaffungsamt.de)

## Key Data

- procurement of thin client workstations
- contract term: 2 years , extension 2 x 1 year (optional)
- budget: 15 Mio €
- only exclusion criteria

# Sustainability Criteria

- product safety and emissions
  - CE label is mandatory (declaration of Conformity of the manufacturer or importer is available)

# Sustainability Criteria

- noise emissions
  - noise power level of thin clients and equipment (e. g. power supply) 0 dB (A), on basis EN ISO 7779:2001 and ISO 9296:1988

# Sustainability Criteria

- durability
  - temporal distance between End of Life (EoL) and End of Service (EoS)
  - spare parts and accessories: at least 5 years after EoL
  - firmware and update of operating system: at least 5 years after EoL

# Sustainability Criteria

- material properties
  - no Halogen-containing polymers and chlorine or organic bromine compounds
  - according to EU-directive 67/548/EWG
    - no Carcinogens
    - no Mutagens
    - no toxins in relation to reproduction
  - except: process-related unavoidable impurities

# Sustainability Criteria

- material properties
  - other substances bans according to ElektroG (Law concerning the Sale, Return and the disposal of electrical and electronic equipment )
  - plastic parts shall be metallized only in justified cases.
  - batteries must meet the requirements of current EU Battery Directive.

# Sustainability Criteria

- protection of natural resources
  - return of the devices according to ElektroG §10 Absatz 2
  - Plastic parts weighing more than 25 grams must be permanently marked according to ISO 11469:2000



# Sustainability Criteria

- local energy management
  - The thin clients are supplied with an activated power management. The device must support an Advanced Configuration and Power Interface (ACPI)-compliant operating system.
  - The System must have an on-off switch, which is easily accessible. Through its operation the unit must be at least in the off-mode condition (ACPI S5 or equivalent).
  - A change from the sleep (note-off) in the ready state (idle) must not last longer than 5 seconds.

# Sustainability Criteria

- power supply
  - adjusted power to the consumption of the device
  - power supply efficiency at least 85%
  - active pvc (Power Form Correction Factor)

## Sustainability Criteria

The device must be configured in a way, that after a given time interval of user inactivity all electrical loads are automatically disabled in the device. Two scenarios are possible: maintaining the session and separation of the session (sleep).

It is expected that for the indication of the power consumption a measurement protocol is added. The awarding authority reserves the right to verify the value by its own measurement. Incorrect information may result in an exclusion.

## TCO calculation

- price of the offer + electricity costs
- power consumption (idle) in Wh
  - This value is taken into account with 8 hours, 220 days, 5 years, number of thin clients and a electricity price of 0,25 €/kWh.