

EN
ANNEX

EU ECOLABEL CRITERIA AND ASSESSMENT REQUIREMENTS

Criteria for awarding the EU Ecolabel to electronic displays:

1. Energy Consumption
 - (a) Energy savings
 - (b) Power management
2. Substitution of hazardous substances used in the main electronic displays components
Lifetime extension
 - (a) Repairability
3. End-of-life management: Design and material selection
 - (a) Material selection and information to improve recyclability
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6. Information
 - (a) User instructions
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Assessment and verification

(a) Requirements

The specific assessment and verification requirements are indicated within each criterion.

Where the applicant is required to provide declarations, documentation, analyses, test reports, or other evidence to show compliance with the criteria, these may originate from the applicant and/or his supplier(s) and/or their supplier(s), as appropriate.

Where appropriate, test methods other than those indicated for each criterion may be used if these are described in the user manual of the Ecolabel criteria application and the competent body assessing the application accepts their equivalence.

Competent bodies shall preferentially recognise tests which are accredited according to ISO 17025 and verifications performed by bodies which are accredited under the EN 45011 standard or an equivalent international standard.

Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications.

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Criterion 1 – Energy consumption

Electronic displays shall fulfil the following criteria

Criterion 1(a) Energy savings

Power demand in on-mode

The on-mode power demand of an electronic display shall not exceed the following Energy Efficiency Index (EEI) determinations in accordance to the equations as set out in Annex II of the *Commission Regulation (EU) No. ## of ## implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for electronic displays*¹:

- (a) For electronic displays with a visible area of the screen $\leq 15.9 \text{ dm}^2$:
 - (i) At the date of adoption of the Decision: $\text{EEI} \leq 0.40$
 - (ii) Two years from the date of adoption of the Decision: $\text{EEI} \leq 0.30$
- (b) For electronic displays with a visible area of the screen $> 15.9 \text{ dm}^2$:
 - (i) At the date of adoption of the Decision: $\text{EEI} \leq 0.30$
 - (ii) Two years from the date of adoption of the Decision: $\text{EEI} \leq 0.20$

Power demand in a condition providing networked standby

- (a) The power demand of electronic display with HiNA functionality, in a condition providing networked standby shall not exceed 8 W.
- (b) The power demand of electronic displays without HiNA functionality in a condition providing networked standby shall not exceed 4 W.

Assessment and verification

The electronic display must be tested according to the measurement methods indicated in Annex III of the Commission Regulation (EU) No. ## of ## implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for electronic displays. The test report shall be submitted to the Competent Body with the application.

Criterion 1(b) Power management

- (a) *Manual Brightness Control*: The electronic display shall allow the user to manually adjust the backlight intensity.
- (b) *Automatic Brightness Control*: The electronic display shall have a light sensor that automatically adjusts the picture brightness to the ambient light conditions (Automatic Brightness Control, ABC). The ABC shall be enabled by default.
In on mode at an ambient light level of $\leq 1 \text{ Lux}$ the power consumption shall be at least 20 percent lower than in on mode at an ambient light level of 300 Lux.
With ABC enabled, the minimum brightness should preferably be manually adjustable.

¹ Not yet published.

Assessment and verification

The applicant shall provide the competent body with a declaration to certify that the appliance has been shipped in the power management settings stated above.

The applicant shall submit a test protocol on the on mode power consumption measured according to EN 62087 at ambient light levels of ≤ 1 Lux and 300 Lux as well as their ratio to each other.

Criterion 2 – Substitution of hazardous substances used in the main electronic displays components

2(a) Substances of Very High Concern (SVHC's)

The product shall not, unless specifically derogated, contain substances that:

- (i) Meet the criteria in Article 57 of Regulation (EC) No 1907/2006,
- (ii) Have been identified according to the procedure described in Article 59(1) of Regulation (EC) No 1907/2006 which establishes the candidate list for substances of very high concern.

These conditions apply to substances that carry out a function to the final product and to substances that may be present as impurities or contaminants. No derogation shall be given concerning substances that meet either of these two conditions, and which are present in an article or in any homogeneous part of a complex article in concentrations greater than 0,1 % (weight by weight).

Assessment and verification

Substances that are present in the final product shall be screened against the latest version of the candidate list published by ECHA. The applicant shall compile declarations of compliance from, as a minimum, tier 2 suppliers. Where a derogation has been granted then the applicant shall show that use of the substance is in compliance with the relevant concentration limits and derogation conditions.

2(b) Restrictions based on hazard classifications

Hazardous substances that may be present in main components of the electronic display that, in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council² or Council Directive 67/548/EC³, meet the criteria for classification with the hazard

² Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives

classes or risk phrases listed in table 2.1 shall not be used unless they have been specifically derogated. The main components of a electronic display are defined as comprising:

- Printed Circuit Boards
- Electrical contacts
- Electrical and data connections (internal and external)
- External cables and power packs
- External housing and enclosure materials
- Peripheral devices
- Liquid Crystal Display unit
- Screen LED backlights

Homogeneous parts with a weight of below 25 g and the metal chassis of the product are excluded from the scope of this criterion.

The hazard classifications in Table 2.1 generally refer to substances. However, if information on substances cannot be obtained, the classification rules for mixtures apply. The most recent classification rules adopted by the European Union shall take precedence over the listed hazard classifications or risk phrases.

The use of substances or mixtures which change their properties upon processing (e.g., become no longer bioavailable, undergo chemical modification) so that the identified hazard no longer applies are exempted from the above requirements. This shall include polymers that have been modified to incorporate a function and additives which become covalently bonded with polymers.

Table 2.1: Restricted hazard classifications and risk phrases and their CLP categorisation

Acute toxicity	
Category 1 and 2	Category 3
H300 Fatal if swallowed (R28)	H301 Toxic if swallowed (R25)
H310 Fatal in contact with skin (R27)	H311 Toxic in contact with skin (R24)
H330 Fatal if inhaled (R23/26)	H331 Toxic if inhaled (R23)
H304 May be fatal if swallowed and enters airways (R65)	EUH070 Toxic by eye contact (R39/41)

Specific target organ toxicity

³ 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).
 Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (OJ 196, 16.8.1967, p. 1).

Category 1	Category 2
H370 Causes damage to organs (R39/23, R39/24, R39/25, R39/26, R39/27, R39/28)	H371 May cause damage to organs (R68/20, R68/21, R68/22)
H372 Causes damage to organs (R48/25, R48/24, R48/23)	H373 May cause damage to organs (R48/20, R48/21, R48/22)
Carcinogenic, mutagenic or toxic for reproduction	
Category 1A and 1B	Category 2
H340 May cause genetic defects (R46)	H341 Suspected of causing genetic defects (R68)
H350 May cause cancer (R45)	H351 Suspected of causing cancer (R40)
H350i May cause cancer by inhalation (R49)	
H360F May damage fertility (R60)	H361f Suspected of damaging fertility (R62)
H360D May damage the unborn child (R61)	H361d Suspected of damaging the unborn child (R63)
H360FD May damage fertility. May damage the unborn child (R60, R60/61)	H361fd Suspected of damaging fertility. Suspected of damaging the unborn child (R62/63)
H360Fd May damage fertility. Suspected of damaging the unborn child (R60/63)	H362 May cause harm to breast fed children (R64)
H360Df May damage the unborn child. Suspected of damaging fertility (R61/62)	
Hazardous to the aquatic environment	
Category 1 and 2	Category 3 and 4
H400 Very toxic to aquatic life (R50)	H412 Harmful to aquatic life with long-lasting effects (R52/53)
H410 Very toxic to aquatic life with long-lasting effects (R50/53)	H413 May cause long-lasting effects to aquatic life (R53)
H411 Toxic to aquatic life with long-lasting effects (R51/53)	
Hazardous to the ozone layer	
EUH059 Hazardous to the ozone layer (R59)	

Assessment and verification:

The applicant shall obtain declarations of compliance from, as a minimum tier 2 suppliers. This shall declare that, where used in the listed components, the following substances do not meet the criteria for classification with one or more of the hazard classifications or risk phrases listed in table 2.1:

- Flame retardants
- Plasticisers
- Plastic stabilisers
- Plastic colorants
- Biocides in plastic and rubber
- Plastic contaminants
- Electrical contacts
- Thermal conductors
- External metals
- Liquid crystals in displays
- LED doping and luminescence

Where substances are derogated in 2(c) or 2(d) then the declaration shall specifically identify those derogated substances and provide supporting evidence showing how the derogation conditions are to be met.

The following technical information shall be provided to support the declaration of classification or non-classification for each substance:

- (i) For substances that have not been registered under Regulation (EC) No 1907/2006 or which do not yet have a harmonised CLP classification: Information meeting the requirements listed in Annex VII to that Regulation;
- (ii) For substances that have been registered under Regulation (EC) No 1907/2006 and which do not meet the requirements for CLP classification: Information based on the REACH registration dossier confirming the non-classified status of the substance;
- (iii) For substances that have a harmonised classification or are self-classified: SDS where available. If these are not available or the substance is self-classified then information shall be provided relevant to the substances hazard classification according to Annex II to Regulation (EC) No 1907/2006;
- (iv) In the case of mixtures: safety data sheets where available. If these are not available then calculation of the mixture classification shall be provided according to the rules under Regulation (EC) No 1272/2008 together with information relevant to the mixtures hazard classification according to Annex II to Regulation (EC) No 1907/2006.

SDS shall be completed in accordance with the guidance in Section 2,3,9,10, 11 and 12 of Annex II to Regulation (EC) 1907/2006 (requirements for the compilation of SDS).

2(c) Derogation of substances with an improved hazard profile

In accordance with Article 6(7) of Regulation (EC) No 66/2010 the substance groups in table 2.2 are specifically derogated from the requirements set out in Article 2(b) and in accordance with the associated derogation conditions.

Table 2.2. Derogation of substitutes with an improved hazard profile

Substance group	Sub-components	Hazard derogations	Derogation conditions
Flame retardants	Printed Circuit Boards	<i>Not required</i>	Control of associated hazardous reaction products.
	Internal connectors and switches	H413	-
	External power cables	<i>Not required</i>	-
	Plastic enclosures and casings	H412, H413	Control of PFOA emissions from PTFE production
	Recycled plastic in enclosures and casings	FR's and their synergists that are not restricted or identified as SVHC's	Declaration of FR and synergist present obtained from the component supplier.
Plasticisers	External cables	H411	-
	Recycled content (all components)	Substances present in recyclate that are not SVHC's.	-

2(d) Restriction of substances in specified components

The final product and, where stipulated, specified components shall not contain the hazardous substances listed in table x at or above the specified concentration limits or according to the

specified restrictions. The restrictions in the RSL take precedence over any derogations listed in Criterion 2(C).

Verification and testing requirements are specified in table 2.3. Laboratory testing, where required, shall be carried out for each production model. Testing shall be carried out annually during the license period in order to demonstrate ongoing compliance.

Table 2.3. Restriction of substances within components

Substance group	Restriction	Concentration limit
Plasticisers	DEHP, BBP, DBP, DIBP, DMEP, DIPP, DPP, DnPP and DnHP shall not be present in external cables and power packs.	A sum total concentration limit of 0.1% is proposed.
	Medium Chained Chlorinated Paraffins (MCCP's) Alkanes C14-17 shall not be present in external cables and power packs.	A sum total concentration limit of 0.1% is proposed.
Plastic stabilisers	Lead shall not be present in external cables, wires and connecting cords.	Concentrations at or greater than 300 ppm. <i>A test method is proposed to be specified.</i>
Plastic colourants	Colourants containing lead, chromium VI and cadmium, including those included in the Candidate List, shall not be used.	<i>The potential to specify testing is to be discussed.</i>
	Pigments and dyes used to colour ABS shall be colour fast.	<i>A migration test is to be identified.</i>
Biocides	Biocides intended to provide a hygiene (anti-bacterial) function shall not be added to keyboards and peripherals.	Self-declaration obtained from component suppliers.
Plastic contaminants	The 18 listed Polycyclic Aromatic Hydrocarbons (PAHs) shall not be present above individual and sum total concentration limits in the external	The following concentrations shall apply:

	surfaces of notebooks and tablets; peripheral keyboards, mice, stylus and trackpads; external power cables.	Individual concentrations for the eight REACH restricted PAHs shall be 1 ppm The sum total concentration of the 18 listed PAHs shall not be greater than 18 ppm
Electrical contacts	RoHS exemption 8b shall not be granted to ecolabelled electronic displays	Declaration by the manufacture detailing the alternative solder specified.
Ceramic heat conductors	Beryllium and its compounds shall not be used in parts at concentrations greater than 0.1%	Self-declaration obtained from component suppliers.
External metal parts	Nickel in stainless steel shall be restricted in-line with REACH where any external part will be in close and prolonged contact with the skin.	<i>Verification shall be by analytical testing for migration.</i>

Assessment and verification:

The applicant shall provide a declaration of compliance with the restriction list in table x supported by evidence as applicable to the substances used to manufacture components within the final product. Testing, where required, shall be carried out upon application for each production model licensed and once a year thereafter, with results then communicated to the relevant competent body.

Failure of a test result during a license period shall result in retesting for the specific product line. If the second test fails then the license shall be suspended for the specific product line. Remedial action will then be required in order to re-instate the license.

Criterion 3 – Lifetime extension

Criterion 3(a) – Repairability

For the purpose of undertaking repairs and replacements of worn out components or parts, the following criteria shall be fulfilled:

(a) Design for repair: The following components of electronic displays, if applicable, shall be easily accessible and exchangeable by the use of universal tools (i.e. widely used commercially available tools as screwdriver, spatula, plier, or tweezers):

- (i) Screen assembly and LCD backlight,
- (ii) stands, and
- (iii) power and control circuit boards.

Indicatively, the following should be used: The back cover should be one piece and secured by screws to enable multiple access cycles; it should not use irreversible snap-fits. The backing chassis / PCBs should be removable in one assembly to access the screen components. Screw numbers minimised (e.g. by lugs and slots). Screw heads standardised with no more than three head sizes. Detachable electrical connectors (e.g. clip or screw) should be used rather than soldered or crimped joints where access is required. The following should not be used: self-tapping screws, irreversible snap-fits or adhesives where access is required. Tamper-proofing (such as plastic covers or labels) should only be used to ensure authorised repair under warranty and should not inhibit other repairs outside of the warranty period. Special tools include e.g. screwdrivers with special heads (e.g. torx), heat gun, thermal pad, soldering iron.

(b) Repair manual: The applicant shall provide clear disassembly and repair instructions (e.g. hard or soft copy, video) being publicly available, to enable a non-destructive disassembly of products for the purpose of replacing key components or parts for repairs.

(c) Repair Service / Information: Information should be included in the user instructions or the manufacturer's website to let the user know where to go to obtain professional repairs and servicing of the electronic display, including contact details as appropriate. Service should not be limited exclusively to applicant's Authorized Service Providers.

(d) Availability of spare parts: The applicant shall ensure that original or backwardly compatible spare parts are publicly available for a certain time following the end of the model production:

- (i) Televisions: at least seven years
- (ii) External computer displays: at least five years

Assessment and verification:

The applicant shall declare the compliance of the product with these requirements to the competent body. Additionally, the applicant shall provide a copy or online-version of the repair manual and the user instructions.

Criterion 4 – End-of-life management: Design and material selection

Electronic displays shall fulfil the following criteria

Criterion 4(a) Material selection and information to improve recyclability

(a) Variety of plastics:

- (i) Plastic parts with a mass greater than 25 grams may consist of a single polymer or a polymer blend compatible for the recycling. The compatibility for recycling shall be verified.
- (ii) Overall in the product there shall be a maximum of 4 types of plastic used of plastic parts with a mass greater than 25 grams.
- (iii) Plastic used for housings and enclosures shall consist of a maximum of two polymers in a form that is compatible with recycling. The compatibility for recycling shall be verified.

(b) Surface coating / metal inlays: All plastic materials used for housings and enclosures shall have no surface coatings or metal inlays.

(c) Material information to facilitate recycling: Plastic parts with a mass greater than 25 grams shall be marked in accordance with ISO 11469 and ISO 1043, sections 1-4. For plastic parts greater than 25 grams the CAS number of flame retardants shall additionally be marked "FR(ISO 1043-4 code) - CAS No". For plastic parts > 200 grams, the marking should be large enough and located in a visible position in order to be easily identified by workers of specialised recycling firms.

Exemptions are made in the following cases:

- (i) Where the marking would impact on performance or functionality of the plastic part, including light guides
- (ii) Where parts cannot be marked because there is not enough available appropriate surface area for the marking to be of a legible size to be identified by a recycling operator;
- (iii) Where marking is technically not possible due to the moulding method; or
- (iv) Where the addition or location of marking causes unacceptable defect rates under quality inspection, leading to unnecessary wastage of materials

(d) Recycled content: Plastic parts of the housings and enclosures as well as of structural elements with a mass > 25 grams shall have a total content of post-consumer recyclates material of not less than 10% by mass. Where the post-consumer recyclates content is higher than 25% a declaration may be made in Box 2 of the Ecolabel (see Criterion 7.2). Recycled content shall be demonstrated according to the requirements of ISO 15343. Recyclates may contain flame retardants that are specifically derogated in Criterion 2(c) Printed circuit boards as well as transparent plastics that form part of display units are exempted from this requirement.

- (e) Recyclability of plastic containing flame retardants: The potential for closed loop recycling in a new electronic product of plastic required to meet fire protection standards shall be greater than 25%.
- (f) Recyclability of metal housings and enclosures: The recyclability of metals and alloys used for casings shall be verified.

Assessment and verification

- *The applicant shall declare compliance of the product with these requirements to the Competent Body.*
- *The applicant shall provide the Competent Body with an exploded diagram of the electronic display in written or audio-visual format, identifying the plastic parts greater than 25 grams in mass, their polymer composition and compatibility for the recycling, as well as associated markings and identifications of flame retardants.*
- *The information shall include documentation to prove the conformity to the above mentioned ISO standards, specifications of the marking (dimension and position) and, where applicable exemptions. A technical justification shall be provided where an exemption applies.*
- *The applicant shall provide the Competent Body with documentation verifying traceability for the post-consumer recycled content according to the above mentioned ISO standard.*
- *The recyclability of the housing and enclosures shall be verified by a declaration from a permitted treatment operation in accordance with Article 23 of Directive 2008/98/EC (the WEEE Directive) that there is an end-market for the materials.*

Criterion 4(b) Design for dismantling and recycling

For recycling purposes electronic displays shall be designed so that:

- (a) For the following components an efficient manual disassembly by one person in a specialised company shall be possible to carry out using common commercially available tools (i.e. pliers, screw-drivers, cutters and hammers as defined by ISO 5742, ISO 1174, ISO 15601):
- (i) Printed Circuit Boards >10 cm²
 - (ii) Thin Film Transistor (TFT) unit >100 cm² and film conductors
 - (iii) Polymethyl Methacrylate (PMMA) board light guide
- (b) The time required for extract these components shall not exceed the following:
- (i) 220 seconds for display with a size smaller than 25 inches (diagonal screen size);
 - (ii) 320 seconds for displays with a size greater than or equal to 25 inches and smaller than 40 inches (diagonal screen size);
 - (iii) 480 seconds for displays with a size greater than or equal to 40 inches and smaller than 55 inches (diagonal screen size).

- (c) At least one of the following optional components shall also be efficiently manually disassembled with reporting of the additional time requirement based on the fastest identified sequence following on from (b):
- (i) LED backlight units
 - (ii) Speaker unit magnets (for display sizes greater than or equal to 25 inches)
 - (iii) HDD drive (if applicable in the case of smart devices)

Assessment and verification

The applicant shall declare compliance with the requirements to the competent body.

The applicant shall provide a 'test disassembly report' to the competent body including the adopted disassembly sequence (steps and procedures), identification of the optional components selected, the reported timings and the tools needed for the disassembly. Reference shall be made to the extraction timing method outlined in the user manual

The report may be submitted either in writing or in digital format, supported by photos, drawings and/or videos.

The reported timings for disassembly and the related disassembly sequence shall be provided for verification by either:

- (i) *A third party, testing body.*
- (ii) *A specialised recycling firm that is a permitted treatment operation in accordance with Article 23 of Directive 2008/98/EC.*

Criterion 4(c) Packaging

Where cardboard boxes are used, they shall be made of at least 80 % recycled material.

Where plastics are used for the final outer packaging, they shall be made of at least 75 % recycled material. Plastics used for protectively covering the product within the outer packaging are exempted from this requirement.

Assessment and verification

A sample of the product packaging shall be provided on application, together with a corresponding declaration of compliance with this criterion. Only primary packaging, as defined in European Parliament and Council Directive 94/62/EC, is subject to the criterion.

Criterion 5 – Corporate Social Responsibility

Criterion 5(a) – Labour conditions during manufacturing

OPTION A (required)

The applicant shall demonstrate that the product is manufactured under working practices that promote good labour relations and working conditions by proving that more than 90% of the first-tier suppliers (final product assembly) comply with the following ILO Conventions:

- a) **Child Labour:**
- i. ILO Core Convention “Minimum Age” (No. 138)
 - ii. ILO Core Convention “Worst Forms of Child Labour” (No. 182)
- b) **Forced and Compulsory Labour:**
- i. ILO Core Convention “Forced Labour” (No. 29)
 - ii. ILO Core Convention “Abolition of Forced Labour” (No. 105)
- c) **Freedom of Association and Right to Collective Bargaining:**
- i. ILO Core Convention “Freedom of Association and Protection of the Right to Organise” (No. 87)
 - ii. ILO Core Convention “Right to Organise and Collective Bargaining” (No. 98)
- d) **Discrimination:**
- i. ILO Core Convention “Discrimination (Employment and Occupation)” (No. 111)
 - ii. ILO Core Convention “Equal Remuneration” (No. 100)
- e) **Working Hours:**
- i. ILO Convention “Hours of Work (Industry)” (No. 1)
- f) **Remuneration:**
- i. ILO Convention “Minimum Wage Fixing” (No. 131)
 - ii. **Living wage:** The applicant shall ensure that wages paid for a normal work week shall always meet at least legal or industry minimum standards and shall be sufficient to meet the basic needs of personnel and to provide some discretionary income; with reference to SA8000 Consolidated Guidance “Remuneration” regarding definition, implementation, auditing and evidence of compliance

Assessment and verification

The applicant shall declare compliance with these requirements to the Competent Body providing the copies of the certificates of Accredited Certification Bodies (CBs) accredited by Social Accountability Accreditation Services (SAAS) showing the compliance with the above requirements in more than 90% of the first-tier suppliers (final product assembly).

Additionally, the applicant shall provide to the Competent Body

- *A list of first-tier suppliers representing at least 90% of procurement expenditure for final product assembly of computers.*
- *The independent social audit reports to verify that he is fulfilling its obligations according to this mandate.*

Additionally, the applicant shall publish the independent social audit reports of the first-tier suppliers online to provide evidence to interested consumers.

OPTION B (optional)

The applicant shall demonstrate that the product is manufactured under working practices that promote good labour relations and working conditions by proving that more than 90% of the first-tier suppliers (final product assembly) comply with the following principles (derived from SA8000, including ILO all fundamental as well as further relevant labour conventions):

- a) **Child Labour:** No use or support of child labour; policies and written procedures for remediation of children found to be working in situation; provide adequate financial and other support to enable such children to attend school; and employment of young workers conditional.
- b) **Forced and Compulsory Labour:** No use or support for forced or compulsory labour; no required 'deposits' - financial or otherwise; no withholding salary, benefits, property or documents to force personnel to continue work; personnel right to leave premises after workday; personnel free to terminate their employment; and no use nor support for human trafficking.
- c) **Health and Safety:** Provide a safe and healthy workplace; prevent potential occupational accidents; appoint senior manager to ensure OSH; instruction on OSH for all personnel; system to detect, avoid, respond to risks; record all accidents; provide personal protection equipment and medical attention in event of work-related injury; remove, reduce risks to new and expectant mothers; hygiene- toilet, potable water, sanitary food storage; decent dormitories- clean, safe, meet basic needs; and worker right to remove from imminent danger.
- d) **Freedom of Association and Right to Collective Bargaining:** Respect the right to form and join trade unions and bargain collectively. All personnel are free to: organize trade unions of their choice; and bargain collectively with their employer. A company shall: respect right to organize unions & bargain collectively; not interfere in workers' organizations or collective bargaining; inform personnel of these rights & freedom from retaliation; where law restricts rights, allow workers freely elect representatives; ensure no discrimination against personnel engaged in worker organizations; and ensure representatives access to workers at the workplace.
- e) **Discrimination:** No discrimination based on race, national or social origin, caste, birth, religion, disability, gender, sexual orientation, union membership, political opinions and age. No discrimination in hiring, remuneration, access to training, promotion, termination, and retirement. No interference with exercise of personnel tenets or practices; prohibition of threatening, abusive, exploitative, coercive behaviour at workplace or company facilities; no pregnancy or virginity tests under any circumstances.
- f) **Disciplinary Practices:** Treat all personnel with dignity and respect; zero tolerance of corporal punishment, mental or physical abuse of personnel; no harsh or inhumane treatment.
- g) **Working Hours:** Compliance with laws & industry standards; normal work-week, not including overtime, shall not exceed 48 hours; 1 day off following every 6 consecutive work days, with some exceptions; overtime voluntary, not regular, not > 12 h/w; required overtime only if negotiated in CBA.

- h) **Remuneration:** Respect right of personnel to living wage; all workers paid at least legal minimum wage; wages sufficient to meet basic needs & provide discretionary income; deductions not for disciplinary purposes, with some exceptions; wages and benefits clearly communicated to workers; paid in convenient manner – cash or check form; overtime paid at premium rate; prohibited use of labour-only contracting, short-term contracts, false apprenticeship schemes to avoid legal obligations to personnel.
- i) **Management Systems:** Facilities seeking to gain and maintain certification must go beyond simple compliance to integrate the standard into their management systems & practices.

Assessment and verification

The applicant shall declare compliance with these requirements to the Competent Body providing the copies of the certificates of Accredited Certification Bodies (CBs) accredited by Social Accountability Accreditation Services (SAAS) showing the compliance with the above requirements in more than 90% of the first-tier suppliers (final product assembly).

Additionally, the applicant shall provide to the Competent Body

- *A list of first-tier suppliers representing at least 90% of procurement expenditure for final product assembly of computers.*
- *The independent social audit reports to verify that he is fulfilling its obligations according to this mandate.*

Additionally, the applicant shall publish the independent social audit reports of the first-tier suppliers online to provide evidence to interested consumers.

Criterion 5(b) – 'Conflict-free minerals' in electronics

The applicant shall support the responsible sourcing of “conflict-free minerals” from the African Great Lakes Region. In this context, the material scope encompasses tin, tantalum, tungsten and their ores and gold.

Assessment and verification

The applicant shall declare the compliance with these requirements and shall provide additionally a description of the way he engages in responsible sourcing projects in the African Great Lakes Region for at least one of the above listed conflict minerals to the Competent Body.

As responsible sourcing projects, all activities carried out within the Democratic Republic of the Congo that aim to source minerals in accordance with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas are eligible (e.g. the Public Private Alliance for Responsible Minerals Trade, the Conflict-Free Tin Initiative, and the Solutions for Hope Project)..

Criterion 6 – Further criteria

Criterion 6(a) Ergonomics

The ergonomic properties of electronic displays shall be tested according to EN ISO 9241-307 and at least meet the requirements of pixel error class 2.

Assessment and verification

The applicant shall evidence compliance with the ergonomics requirements by submission of the test protocol prepared by a testing laboratory accredited under EN ISO/IEC 17025.

Criterion 6(b) Fluorinated GHG emission during LCD production

The applicant shall encourage their display suppliers to abate fluorinated greenhouse gases NF₃ and SF₆, if part of the production process, by a system that is an integrated part of the production process.

For this reason, the applicant shall gather following information from their display suppliers:

- (a) Description of goals in place and steps taken to reduce F-GHG emissions, for example process optimization, use of alternative chemistries, capture / recycling, and / or abatement technologies.
- (b) Specification which of the used F-GHGs (i.e. SF₆, NF₃, PFCs, and HFCs) are being reduced.
- (c) Information if the supplier participates in any national or international consensus-based or voluntary efforts to reduce F-GHG emissions from flat panel display manufacturing.
- (d) Information about the methods applied to estimate aggregate annual F-GHG emissions
- (e) Estimated annual F-GHG emissions intensity (if possible, in kg CO_{2e} per m² of flat panel displays (array glass) produced) across manufacturing fabs for the most recent year.
- (f) Indication of the destruction or removal efficiencies (DREs) of the installed abatement systems for each of the F-GHGs used.

Assessment and verification

The applicant shall declare the compliance with these requirements and shall additionally provide the information sheets of their display suppliers to the Competent Body.

Criterion 7 – Information

Criterion 7(a) User instructions

The electronic display shall be sold with relevant user information that provides advice on its proper environmental use. The information shall be located in a single, easy-to-find place in the user instructions as well as on the manufacturer's website. The information shall include in particular:

- (a) Energy consumption:
 - (i) The maximum power demand in each operating mode, expressed in Watts.

- (ii) Instructions must be provided on how to use the device's energy saving mode (e.g. Automatic Power Down).
- (iii) The annual energy consumption in kWh per year, based on the power demand of the electronic display operating 4 hours per day for 365 days. Additional note that the actual energy consumption will depend on how the display is used.
- (b) Information that energy efficiency cuts energy consumption and thus saves money by reducing electricity bills;
- (c) The following indications on how to reduce power consumption:
 - (i) Turning the product off at its mains supply, un-plugging it, or using the hard off-switch (where one is fitted) will cut energy use to (near) zero;
 - (ii) Putting the product into standby mode will reduce energy consumption, but will still draw some power;
 - (iii) Reducing the brightness of the screen will reduce energy use; using manual and/or automatic brightness control (ABC) facilitates energy savings;
 - (iv) External computer displays: Note that screen savers can stop displays from powering down into a lower power mode when not in use. Ensuring that screen savers are not activated on displays can therefore reduce energy use;
 - (v) Televisions:
 - Note that a Quick Start Function might cause increased power consumption;
 - Note that integrated functions, such as a receiver for digital signals (e.g. DVB-T) or hard disk recorders may help reducing power consumption if, as a result, an external device becomes redundant.
- (d) Network connectivity (if applicable): Information on how to deactivate networking functions
- (e) The position of the hard off-switch (where one is fitted).
- (f) Information that extension of the product's lifetime reduces the overall environmental impacts.
- (g) The following indications on how to prolong the lifetime of the product⁴:
 - (i) Clear disassembly and repair to enable a non-destructive disassembly of products for the purpose of replacing key components or parts for repairs.
 - (ii) Information to let the user know where to go to obtain professional repairs and servicing of the product, including contact details as appropriate; service should not be limited exclusively to applicant's Authorized Service Providers.
- (h) End-of-life instructions for the proper disposal of the product at civic amenity sites or through retailer take-back schemes as applicable, which shall comply with Directive 2012/19/EU of the European Parliament and of the Council.

⁴ Depending on the final decision on sub-criteria in section **Error! Reference source not found.**

- (i) Information that the product has been awarded the EU Ecolabel with a brief explanation as to what this means together with an indication that more information on the Ecolabel can be found at the website address <http://www.ecolabel.eu>
- (j) Any print-versions of instruction/repair manual(s) should contain recycled content and should not contain chlorine bleached paper. To save resources, online versions should be preferred.

Assessment and verification

The applicants shall declare the compliance of the product with these requirements to the competent body and shall provide a link to the online-version or a copy of the user instructions / repair manual to the Competent Body.

Criterion 7(b) Information appearing on the Ecolabel

The optional label with text box shall contain the following texts:

- high energy efficiency
- mercury-free backlights (if the product contains an LED display)
- designed to facilitate longer lifetime
- designed to facilitate recycling
- contains xy% post-consumer recyclates (only when being higher than 25%)

The guidelines for the use of the optional label with text box can be found in the "Guidelines for use of the Ecolabel logo" on the website:

http://ec.europa.eu/environment/ecolabel/documents/logo_guidelines.pdf

Assessment and verification

The applicant shall provide a sample of the product label or an artwork of the packaging where the EU Ecolabel is placed, together with a signed declaration of compliance.