

Frequently Asked Questions (FAQs) on COMMISSION REGULATION (EU) 2019/2021 laying down ecodesign requirements for electronic displays, and COMMISSION DELEGATED REGULATION (EU) 2019/2013 with regard to energy labelling of electronic displays

Version: February 2023

This document summarises questions and answers of general interest regarding the COMMISSION REGULATION (EU) 2019/2021 laying down ecodesign requirements for electronic displays, and COMMISSION DELEGATED REGULATION (EU) 2019/2013 with regard to energy labelling of electronic displays.

The answers provided reflect a common understanding of Commission services and the Market Surveillance Authorities of Member States. The answers as such are not legally binding. A binding interpretation of Community law is the sole competence of the European Court of Justice.

These FAQs cannot go beyond or substitute for the requirements of these Regulations which are binding in their entirety and directly applicable in all Member States.

Ecodesign Regulation 2019/2021

1. Displays as spare parts

Question:

The Regulation specifies in Article 1 (2) point (g) that displays that are components or sub-assemblies as defined in point 2 of Article 2 of Directive 2009/125/EU are excluded from the scope of the Regulation. This exemption was intended to apply to displays integrated in other products. However, it is not specified whether displays provided as spare parts shall be considered out of scope of the Regulation.

Answer:

Displays integrated in other products can be considered as components or sub-assemblies, and therefore excluded from the scope of the Regulation if their environmental performance cannot be assessed independently as stated in point 2 of Article 2 of Directive 2009/125/EU. It is irrelevant whether a display is commercialised as “component or sub-assembly”, “spare part”, “display tile” or “integrated display”. Displays provided as spare parts are therefore exempted if for example they do not have a suitable interface for data and power which can be used by authorities for the purpose of testing or other characteristics that would prevent assessing their compliance independently of the product they are to be integrated in.

2. ABC requirements and calculation

Questions:

- The Regulation specifies that to be able to claim the 10% allowance, displays shall implement an ABC function compliant with the characteristics referenced in the Regulation in the “normal configuration” as well as other SDR picture modes available to the end-user. Does that imply that the shop mode configuration is not subject to this requirement?
- For displays correctly implementing the ABC function, a 10% allowance can be deducted from the measured power consumption P_{measured} . Will this allowance also be used in the calculation of energy consumption over 1000h?

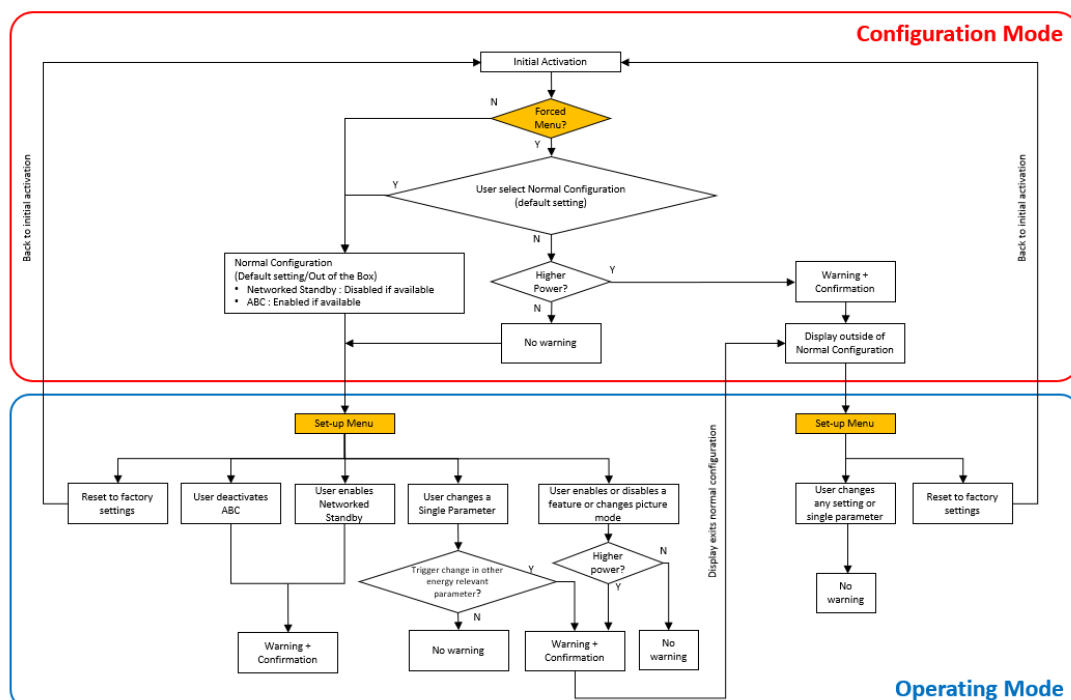
Answers:

- The shop configuration is not intended for the end-user, but for demonstration purposes in highly luminous environments specific to retailer shops. Therefore, the Regulation does not require the shop configuration to have an ABC function enabled by default provided it is not intended to be the “normal configuration”.
- The calculation of the energy consumption over 1000h, as well as the calculation for the EEI, shall be based on the P_{measured} value obtained after the deduction of the 10% allowance, where applicable. This is now explicitly mentioned in an amendment to Regulation 2019/2020.

3. Menu implementation and user warnings

Question:

- Does the flowchart from below correctly illustrate the menu implementation required by the Regulation?
- Some displays lack their own configuration control. Therefore, configuration, settings and parameters values are only managed by an external device, such as a computer. How should the user warnings be implemented in these types of monitors?



Not applicable to Signage displays, Professional Monitors, Broadcast Monitors and Monitors controlled from external devices
Automatic activation of HDR mode when HDR content is displayed is not subject to warnings or confirmations

Answer:

- a) Yes. The flowchart is one illustration of the implementation of the requirements.
- b) In case of displays that are only managed and configured by an external device, such as a computer, the user warnings cannot be implemented in the display and shall be implemented in the controlling device.

In addition, no user warning is required for displays listed in Article 1.3 and 1.4, such as broadcast displays, professional displays, digital signage displays or control panels.

4. Network interfaces

Question:

How shall manufacturers treat HDMI-CEC and Thunderbolt ports under the definition of networked stand-by, considering that these types of ports have physical and/or logical addresses associated with them?

Answer:

HDMI-CEC connections have a logical address assigned depending on their functionality as defined by CEC specifications. This allows a HDMI-CEC to fulfil a number of functions through a single device (e.g. switching all connected devices to standby, use of the menu of another device etc.).

Similarly, Thunderbolt interfaces support wake on LAN and as such can be remotely enabled from a sleep state. Furthermore, they can be used to tunnel display as well as data (USB/PCIe) from a host/endpoint to a host/endpoint/display. Each Thunderbolt device is assigned a topology ID (address) to enable the mapping and directing of the different data types to the proper destination, IDs being relative to the root (host) and assigned by the connection manager based on the position of the device.

In conclusion, both HDMI-CEC and Thunderbolt connections, as associated to a network address and being able to transfer network information/commands, are considered network interfaces or network ports, and they should be treated as such.

5. Automatic power down (APD) in displays powering other devices

Question:

Some displays include the capability of powering other devices, for example computer displays providing a USB Type-C or Thunderbolt connector for a laptop. How shall the automatic power down function be implemented for these products?

Answer:

Displays capable of powering other devices are not exempted from the automatic power down requirements in Annex II C even if the power delivery function remains active. However, the power demand limits for off mode, standby mode or networked standby mode are not applicable when the display is delivering power to an external product (e.g. providing charging functions). The display shall be tested for these limits without delivering power to an external product.

6. Provision of dismantling information

Question:

The Regulation requires manufacturers to make available, on a free access website, the dismantling information needed to access any of the product's components referred to in point 1 of Annex VII of Directive 2012/19/EU.

Since the i4r platform has been developed for the specific purpose of making available such information, would the provision of a reference to the i4r platform <https://i4r-platform.eu/product-category/screens/screens-monitors/> be considered as sufficient to comply with this requirement?

Answer:

An online platform is sufficient to comply with the requirement provided that the dismantling information for that specific model is made available and freely accessible under the provided link. In other words, it would not be sufficient to make available a link to a general page where for example the model number must be entered. In addition, free access is to be understood as without having to pay or provide personal information or any other type of registration information including e.g. an email address or a phone number. The i4R platform would be sufficient provided it meets these conditions.

7. The use of the Cadmium logos

Question:

How should the Cadmium logos be used?

Answer:

The “Cadmium free” logo applies to electronic displays free of Cadmium in any homogeneous material part of the product, while the “Cadmium inside” logo applies to displays that contain Cadmium in the screen panel, for example quantum dot displays.

8. Halogenated flame retardants restriction

Question:

How to determine whether a halogenated substance is a flame retardant?

Answer:

The restriction only covers the use of halogenated flame retardants (HFRs) in the enclosure and stand of the display. A non-exhaustive indicative list of HFRs can be found in the Annex. Disclaimer: this list has been provided by industrial experts and has not been thoroughly checked by Commission services. If a substance from the list is spotted not to be an HFR, please flag this by sending an email to: ENER-ECODESIGN@ec.europa.eu.

Other halogenated compounds that are not flame retardants (e.g. PVC, PTFE) are permitted by the Regulation. For example halogenated compounds that are polymers in accordance to the definition of polymers in Regulation (EC) No 1907/2006 (REACH), and are not flame retardants, are not restricted by this Regulation.

9. Spare parts

Question:

Are manufacturers obliged to provide standardised spare parts (e.g. AAA batteries) and what is the definition of a spare part?

Answer:

The Regulation does not differentiate between “standardised” and “non-standardised” spare parts. The obligation applies to all types of spare parts concerned. Since in this Regulation batteries are specified in the list of spare parts to be made available by manufacturers, they must be provided as such.

10. Commonly available tools

Question:

The Regulation specifies that the disassembly/dismantling of specific components shall be possible with the use of “commonly available tools”, however this term has not been defined. Which tools shall be considered as commonly available?

Answer:

In general, tools made widely available for purchase by any individual or business without restriction, under reasonable conditions are considered commonly available. An indicative non-exhaustive list of tools considered commonly available is provided by the standard EN 45554.

11. External power supplies (EPS)

Question:

How is the on-mode power measured in case of an external power supply?

Answer:

The Regulation describes the measurement of the on-mode power in Annex IIIa Point 1.2.7.

The on-mode power must be measured at the AC input in the following cases:

- displays with an internal power supply,
- displays with an EPS of any kind packaged (bundled) with the device,
- displays with an unbundled but non-USB EPS.

The on-mode power must be measured at the DC input for displays with an unbundled EPS, i.e. not included in the package, compliant with USB-compatible power delivery standards (e.g. IEC-EN 62680).

12. Peak white luminance ratio and the brightest on-mode configuration

Question:

Should the peak white luminance ratio of a display as described in the Regulation be calculated using the brightest on-mode value determined in a configuration (“picture-mode”) pre-set by the manufacturer, or as whatever brightest value which the user can achieve with that particular electronic display?

Answer:

The peak white luminance ratio as defined in the Regulation should be determined in the brightest on-mode configuration which indeed can be a pre-defined setting (such as “vivid”, “dynamic” etc) in the set-up menu. If the end user alters any configuration - including the brightest on-mode - through adjustments of individual parameters such as brightness and this leads to increased energy consumption, this requires that warnings are displayed to, and consent is requested from, the user (cf. last paragraph in Annex II point B.2).

Energy Labelling Regulation 2019/2013

1. Visual advertisements

Question:

In accordance with Article 3 e) and f) as well as Article 4 d) and e), visual advertisements and technical promotional material need to include the energy efficiency class and available classes in accordance to

Annex VII / Annex VIII. Are press releases and written purchase offers considered as visual advertisements and/or technical promotional materials?

Answer:

Any promotional or sales document which contains information about technical parameters or visual elements, be it also press notifications or written purchase offers, must include the energy efficiency class and available classes.

2. The verification of the peak white luminance ratio

Question:

How does the verification procedure work for the peak white luminance ratio value, given that no tolerance is provided in the Regulation?

Answer:

- c) The “omnibus” amendment has clarified the verification procedure by explicitly mentioning that the values included in the technical documentation required under Regulation 2019/2013 shall be declared values. For a display model to be considered compliant with the requirements in the energy labelling Regulation, the declared values shall be within the applicable tolerances of the values obtained by market surveillance authorities when physically testing the model. For the peak white luminance of the normal configuration and the peak white luminance of the brightest on mode configuration the determined value shall not be lower than the declared value by more than 8 %. The peak white luminance ratio is calculated from the two declared values and is implicitly verified if the two declared values used for its calculation are verified. Where applicable, the peak white luminance ratio shall then comply with the minimum requirement of 65% of the ecodesign Regulation. This is now clarified by an amendment to Regulation 2019/2020.

Annex

Non-exhaustive indicative list of halogenated flame retardants (HFR). Disclaimer: this list has been provided by industrial experts and has not been thoroughly checked by Commission services. If a substance from the list is spotted not to be an HFR, please flag this by sending an email to: ENER-ECODESIGN@ec.europa.eu.

<i>HFR restricted in the enclosure and stand of displays</i>	
<i>Substance Name</i>	<i>CAS #</i>
<i>1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)</i>	<i>37853-59-1</i>
<i>1,2-Dibromo-4-(1,2-dibromoethyl)cyclohexane (TBECH)</i>	<i>3322-93-8</i>
<i>2,2-Bis(bromomethyl)-1,3-propanediol</i>	<i>3296-90-0</i>
<i>2,2-Bis(chloromethyl)trimethylene bis[bis(2-chloroethyl)phosphate]</i>	<i>38051-10-4</i>
<i>2,3-Dibromopropyl-2,4,6-tribromophenyl ether (DPTE)</i>	<i>35109-60-5</i>
<i>2,4,6- Tribromophenol</i>	<i>118-79-6</i>
<i>2,4-Dibromophenol</i>	<i>615-58-7</i>
<i>Brominated epoxy resin endcapped with tribromophenol</i>	<i>135229-48-0</i>
<i>Brominated epoxy resin endcapped with tribromophenol (2,2', 6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane and 2,4,6-tribromophenol)</i>	<i>158725-44-1</i>

2-Hydroxypropyl-2-(2-hydroxyethoxy)-ethyl- TBP	20566-35-2
1,2,3- Tribromophenyl-allyl ether	26762-91-4
2-Bromoallyl 2,4,6-tribromophenyl ether (BATE)	99717-56-3
2-Ethylhexyl-2,3,4,5-tetrabromobenzoate (TBB)	183658-27-7
Allyl 2,4,6-tribromophenyl ether (ATE)	3278-89-5
BB 153 (2,2',4,4',5,5'-Hexabromobiphenyl)	59080-40-9
Bis(2-ethyl- 1-hexyl)tetrabromophthalate (TBPH)	26040-51-7
Bis(hexachlorocyclopentadieno)cyclooctane (Dechlorane Plus)	13560-89-9
Chlorendic acid	115-28-6
Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)	13674-87-8
Tris(1-chloro-2-propyl)phosphate (TCPP)	13674-84-5
Tris(2,3-dichloro-1-propyl)phosphate	66108-37-0
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8
Tris (tri bromoneopentyl) phosphate	19186-97-1
2,4,6-tris(2,4,6-tribromophenoxy)-1,3,5-triazine (TTBPTAZ)	25713-60-4
Tris(3-chloropropyl) phosphate	26248-87-3
Tris(2-chloropropyl) phosphate	6145-73-9
Hexahydro-1,3,5-tris(2,3-dibromopropyl)-1,3,5-triazine-2,4,6-trione	52434-90-9
Decabromodiphenylethane (DBDPE)	84852-53-9
Hexabromobenzene (HBB)	87-82-1
Hexabromocyclododecane (HBCD)	25637-99-4
1,2,5,6,9,10-hexabromocyclododecane	3194-55-6
Hexachlorocyclopentadienyl-dibromocyclooctane	51936-55-1
N, N'-Ethylenebis(tetrabromophthalimide)	32588-76-4
Pentabromoethylbenzene (PBEB)	85-22-3
Tetra-decabromodiphen oxybenzene	58965-66-5
Pentabromophenol (PBP)	608-71-9
Pentabromotoluene (PBT)	87-83-2
Short-chain chlorinated paraffins (SCCPs)	85535-84-8
Tetrabromobisphenol A (TBBPA)	79-94-7
Tetrabromobisphenol A bis(2,3-dibromopropyl) ether	21850-44-2
Tetrabromobisphenol A bis(2-hydroxyethyl) ether [TBBPA-DBPE]	4162-45-2
Tetrabromophthalic anhydride	632-79-1
Tetrabromobisphenol A diallyl ether	25327-89-3
TBBA-dimethylether	37853-61-5
Tetrabromobisphenol S	39635-79-5
TBBA carbonate oligomer	28906-13-0
TBBS-bis-(2,3-dibromo-propylether)	42757-55-1
TBBA-TBBA diglycidyl-ether oligomer	70682-74-5
TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
TBPA, glycoland propyleneoxide esters	75790-69-1
TBBA carbonate oligomer, phenoxy end capped	94334-64-2
TBBA-epichlorhydrin oligomer	40039-93-8

<i>Tetrachlorobisfenol A (TCBA)</i>	79-95-8
<i>2,4,6-Tribromoanisol (TBA)</i>	607-99-8
<i>BDE 017 (2,2',4-Tribromodiphenyl ether)</i>	147217-75-2
<i>BDE 028 (2,4,4'-Tribromodiphenyl ether)</i>	41318-75-6
<i>BDE 047 (2,2',4,4'-Tetrabromodiphenyl ether)</i>	5436-43-1
<i>BDE 049 (2,2', 4,5'Tetrabromodiphenyl ether)</i>	243982-82-3
<i>BDE 066 (2,3',4,4'-Tetrabromodiphenyl ether)</i>	189084-61-5
<i>BDE 071 (2',3,4,6'-Tetrabromodiphenyl ether)</i>	189084-62-6
<i>BDE 077 (3,3',4,4'-Tetrabromodiphenyl ether)</i>	40088-47-9
<i>BDE 085 (2,2',3,4,4'-Pentabromodiphenyl ether)</i>	182346-21-0
<i>BDE 099 (2,2',4,4',5-Pentabromodiphenyl ether)</i>	60348-60-9
<i>BDE 100 (2,2',4,4', 6-Pentabromodiphenyl ether)</i>	189084-64-8
<i>BDE 119 (2,3',4,4',6-Pentabromodiphenyl ether)</i>	189084-66-0
<i>BDE 138 (2,2',3,4,4',5'-Hexabromodiphenyl ether)</i>	182677-30-1
<i>BDE 153 (2,2',4,4',5,5'-Hexabromodiphenyl ether)</i>	68631-49-2
<i>BDE 154 (2,2',4,4', 5,6'-Hexabromodiphenyl ether)</i>	207122-15-4
<i>BDE 183 (2,2',3,4,4',5',6-Heptabromodiphenyl ether)</i>	207122-16-5
<i>BDE 196 (2,2,,3,3,,4,4,,5,6'-Octabromodiphenylether)</i>	446255-38-5
<i>BDE 197 (2,2',3,3',4,4', 6,6'-Octabromodiphenyl ether)</i>	117964-21-3
<i>BDE 201 (2,2', 3,3', 4,5', 6,6'-Octabromodiphenyl ether)</i>	446255-50-1
<i>BDE 202 (2,2',3,3',5,5',6,6'-Octabromodiphenyl ether)</i>	67797-09-5
<i>BDE 203 (2,2',3,4,4',5,5',6-Octabromodiphenyl ether)</i>	337513-72-1
<i>BDE 206 (2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether)</i>	63387-28-0
<i>BDE 207 (2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether)</i>	437701-79-6
<i>BDE 208 (2,2', 3,3', 4,5,5', 6,6'-Nonabromodiphenyl ether)</i>	437701-78-5
<i>BDE 209 (2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether) (DecaBDE)</i>	1163-19-5
<i>Penta-bromodiphenyl ether (Penta-BDE)</i>	32534-81-9
<i>Octa-bromodiphenylether(Octa-BDE)</i>	32536-52-0
<i>Nonabromo-1,1'-biphenyl</i>	27753-52-2
<i>Tetrabromo(tetrabromophenyl) benzene</i>	27858-07-7
<i>Hexabromo-1,1'-biphenyl</i>	36355-01-8
<i>Decabromo-1,1'-biphenyl</i>	13654-09-6
<i>4,4 '-dibromobiphenyl</i>	92-86-4
<i>3-bromobiphenyl</i>	2113-57-7
<i>4-bromobiphenyl</i>	92-66-0
<i>Aroclor 4465 (1,2,4,5-tetrachloro-3-(2,3,4,6-tetrachlorophenyl)-6- (2,4,5-trichlorophenyl)benzene)</i>	11120-29-9
<i>1,1'-Biphenyl, chloro derivs</i>	1336-36-3
<i>Ammoniumbromide</i>	12124-97-9
<i>Bis(methyl) tetrabromophthalate</i>	55481-60-2
<i>Tetrakis(hydroxymethyl) -phosphonium chloride</i>	124-64-1
<i>Tribromostyrene</i>	61368-34-1