



Brussels, 16.6.2023
C(2023) 3538 final

COMMISSION REGULATION (EU) .../...

of 16.6.2023

laying down ecodesign requirements for smartphones, mobile phones other than smartphones, cordless phones and slate tablets pursuant to Directive 2009/125/EC of the European Parliament and of the Council and amending Commission Regulation (EU) 2023/826

(Text with EEA relevance)

{SEC(2023) 164 final} - {SWD(2023) 101 final} - {SWD(2023) 102 final}

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products¹, and in particular Article 15(1) thereof,

Whereas:

- (1) Pursuant to Directive 2009/125/EC, the Commission should set ecodesign requirements for energy-related products which account for significant volumes of sales and trade in the Union and which have a significant environmental impact and presenting significant potential for improvement through design in terms of their environmental impact, without entailing excessive costs.
- (2) The Commission has carried out a preparatory study to analyse the technical, environmental and economic aspects of mobile phones, cordless phones and slate tablets. The study has been carried out with stakeholders and interested parties from the Union and third countries, and the results have been made publicly available.
- (3) The steep increase in the demand for smartphones and tablets, combined with their increased functionality, has resulted in increased demand for energy and materials needed to manufacture these devices on the EU market, accompanied by an increase in their associated environmental impacts. In addition, devices are often replaced prematurely by users and are, at the end of their useful life, not sufficiently reused or recycled, leading to a waste of resources. Against this background, the preparatory study identified environmental aspects to be addressed in this Regulation. Those aspects mainly concern resource efficiency and include the avoidance of premature obsolescence, repairability, reliability of the products and their key components such as batteries and display, reusability and recyclability.
- (4) Ecodesign requirements should harmonise resource efficiency requirements for mobile phones, cordless phones and slate tablets throughout the Union for the internal market to operate better and in order to improve the environmental performance of those products. In light of this aim and the environmental aspects to be addressed, the preparatory study showed that ecodesign requirements should relate to design for reliability, including resistance to accidental drops, scratch resistance, protection from

¹ OJ L 285, 31.10.2009, p. 10.

dust and water, and battery longevity, to the ability to be disassembled and repaired, to the availability of operating system version upgrades, to data deletion and the transfer of functionalities after use, to the provision of appropriate information for users, repairers and recyclers as well as to battery endurance.

- (5) In order to ensure that devices are able to be effectively repaired, a range of spare parts should be available to professional repairers or end users. Those spare parts should, regardless of whether they are new or used, have the effect of upgrading or restoring the functionality of the device in which they are installed.
- (6) In order to ensure that devices are able to be effectively repaired, the price of spare parts should be reasonable and should not discourage repair. To create transparency and incentivise the setting of reasonable prices, the indicative pre-tax price for spare parts provided pursuant to this Regulation should be accessible on a free access website.
- (7) It is currently not possible, or extremely difficult, for the owners of mobile phones, including smartphones, and tablets to change the operating system of their device, which is chosen and maintained by the manufacturer through regular updates. Such updates generally lead to the establishment of a range of major and minor versions. Updates may be used to ensure the continued security of a device, to correct errors in the operating system or to offer new functionalities to users. They may be offered voluntarily or might be required to be offered by Union law. In order to improve the reliability of devices, therefore, it needs to be ensured that users keep receiving such updates for a minimum period of time and at no cost, including for a period after the manufacturer stops selling the relevant product model. Such updates should be offered either as updates to the latest available operating system version that has to be installable on the device, or as updates to the operating system version that was installed on the product model at the moment of the end of placement on the market, or subsequent versions.
- (8) The requirement concerning a functionality for secure erasure of the encryption key could be implemented by means of technical solutions such as, but not limited to, a functionality implemented in firmware, typically in the bootloader, in software included in a self-contained bootable environment, or in software installable in the supported operating systems provided with the product.
- (9) The total primary energy consumption of the installed base in the EU27 of mobile phones, cordless phones and slate tablets in 2020 over their lifecycle was 39,5 TWh (of which 28,5 TWh for smartphones, 1,6 TWh for mobile phones other than smartphones, 1,8 TWh for cordless phones and 7,6 TWh for slate tablets), which includes a major share of primary energy consumption in production outside the EU27. Of these 39,5 TWh, the share attributed to electricity consumption - for both production and use - is 26,6 TWh (19,2 TWh, 0,9 TWh, 1,1 TWh and 5,4 TWh, respectively, for smartphones, mobile phones other than smartphones, cordless phones and slate tablets). Without regulatory measures, those values are projected to decrease slightly to 39,3 TWh (29,3 TWh, 1,5 TWh, 1,4TWh and 7,3TWh, respectively, for smartphones, mobile phones other than smartphones, cordless phones and slate tablets) of primary energy in 2030. The combined effect of this Regulation and Commission Delegated Regulation (EU) 2023/XXXX [OP: *please insert reference to C(2023) 1672*] is expected to limit this 2030 value to 25,4 TWh (18,2 TWh, 1,0 TWh, 1,1TWh and 5,2 TWh, respectively, for smartphones, mobile phones other than smartphones, cordless phones and slate tablets), saving around 33 % on the primary energy

consumption of smartphones, mobile phones other than smartphones, cordless phones and slate tablets compared to what would happen if no measures were taken.

- (10) The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council².
- (11) In accordance with Article 8 of Directive 2009/125/EC, this Regulation should specify the applicable conformity assessment procedures.
- (12) To facilitate compliance checks, manufacturers, importers or authorised representatives should provide information in the technical documentation referred to in Annexes IV and V to Directive 2009/125/EC in so far as that information relates to the requirements laid down in this Regulation.
- (13) For market surveillance purposes, manufacturers, importers or authorised representatives should be allowed to refer to the product database if the technical documentation as per Delegated Regulation (EU) 2023/XXXX³ [*OP: please insert reference to C(2023) 1672*] contains the same information.
- (14) In order to protect consumers and to avoid that the rules laid down in this Regulation are circumvented, products that automatically alter their performance in test conditions to improve the declared parameters should be prohibited.
- (15) In addition to the legally binding requirements laid down in this Regulation, indicative benchmarks for best available technologies should be identified to make information on the environmental performance of products subject to this Regulation over their life cycle widely available and easily accessible, in accordance with Directive 2009/125/EC, Annex I, part 3, point (2).
- (16) A review of this Regulation should assess the appropriateness and effectiveness of its provisions in achieving its goals. The timing of the review should take into account, among other factors, whether all provisions have been implemented and show an effect on the market.
- (17) Commission Regulation (EU) 2023/826⁴ should be amended to exclude cordless phones from its scope in order to prevent any overlap with the same products in the scope of this Regulation.

² Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council (OJ L 316, 14.11.2012, p. 12).

³ Commission Delegated Regulation (EU) 2023/XXXX of XX XXX 2023 [*OP: please insert reference to C(2023)1672 and date*] supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to the energy labelling of smartphones and slate tablets (OJ L XXX, XX.XX.2023, p. X).

⁴ Commission Regulation (EU) 2023/826 of 17 April 2023 laying down ecodesign requirements for off mode, standby mode, and networked standby energy consumption of electrical and electronic household and office equipment pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulations (EC) No 1275/2008 and (EC) No 107/2009 (OJ L 103, 18.4.2023, p. 29).

- (18) The entry into application of ecodesign requirements should be 21 months after the entry into force of this Regulation, in order to give manufacturers sufficient time to redesign their products subject to this Regulation.
- (19) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 19(1) of Directive 2009/125/EC,

HAS ADOPTED THIS REGULATION:

Article 1
Subject matter and scope

1. This Regulation establishes ecodesign requirements for the placing on the market of smartphones, other mobile phones, cordless phones and slate tablets.
2. This Regulation does not apply to the following products:
 - (a) mobile phones and tablets with a flexible main display which the user can unroll and roll up partly or fully;
 - (b) smartphones for high security communication.

Article 2
Definitions

1. For the purposes of this Regulation, the following definitions shall apply:
 - (1) ‘mobile phone’ means a cordless handheld electronic device, which has the following characteristics:
 - (a) it is designed for long-range voice communication over either a cellular telecommunications network or a satellite based telecommunications network, requiring a SIM card, eSIM or similar means to identify the connected parties;
 - (b) it is designed for battery mode usage, while connection to mains via an external power supply and/or wireless power transmission is mainly for battery charging purposes;
 - (c) it is not designed to be worn on the wrist.
 - (2) ‘smartphone’ means a mobile phone, which has the following characteristics:
 - (a) it is characterised by wireless network connection, mobile use of internet services, an operating system optimised for handheld use and the ability to accept original and third-party software applications;
 - (b) it has an integrated touch screen display with a viewable diagonal size of 10,16 centimetres (or 4,0 inches) or more, but less than 17,78 centimetres (or 7,0 inches);
 - (c) where the device has a foldable display or has more than one display, at least one of the displays falls into the size range in either opened or closed mode.
 - (3) ‘smartphone for high security communication’ means a smartphone, which has the following characteristics:
 - (a) it is accredited, or otherwise approved by the designated authority in a Member State or is in the process of accreditation or other approval to transmit, process or store classified information;

- (b) it is intended for professional users only;
 - (c) it is capable of detecting physical intrusion to the hardware, including for intrusion detection at least a controller, related wiring, flexible printed circuit board circuitry for drill protection integrated to the device chassis and integrated tamper loops on the main printed circuit board.
- (4) 'professional user' means any natural or legal person, to whom a product has been made available for use in the course of their industrial or professional activities;
 - (5) 'cordless phone' means a cordless handheld electronic device which has the following characteristics:
 - (a) it is designed for long-range voice communication over a landline telecommunications network;
 - (b) it is connected to a base station through a radio interface;
 - (c) it is designed for battery mode usage, while connection to mains via an external power supply is mainly for battery charging purposes.
 - (6) 'base station' means a device that acts as the bridge between the network connection (telephone or Internet connection) and one or several cordless phone handsets, but does not provide router functionality for any other devices. A base station typically provides also the build-in charging cradle to recharge the handset;
 - (7) 'charging cradle' means a device that acts as the charging unit for a single cordless phone handset, but does not provide network connection functionality;
 - (8) 'slate tablet' means a device that is designed for portability and has the following characteristics:
 - (a) it has an integrated touch-sensitive display with a viewable diagonal size greater than or equal to 17,78 centimetres (or 7,0 inches) and less than 44,20 centimetres (or 17,4 inches);
 - (b) it does not have an integrated, physically attached keyboard in its designed configuration;
 - (c) it primarily relies on a wireless network connection;
 - (d) it is powered by an internal battery and is not intended to work without battery;
 - (e) it is placed on the market with an operating system designed for mobile platforms, identical or analogous to smartphones;
 - (9) 'model identifier' means the code, usually alphanumeric, which distinguishes a specific product model from other models with the same trade mark or the same manufacturer's, importer's or authorised representative's name;
 - (10) 'product database' means a collection of data concerning products, which is arranged in a systematic manner and consists of a consumer-oriented public part, where information concerning individual product parameters is accessible by electronic means, an online portal for accessibility and a compliance part, with clearly specified accessibility and security requirements, as laid down in Regulation (EU) 2017/1369;
 - (11) 'equivalent model' means a model which has the same technical characteristics relevant for the technical information to be provided, but which is placed on the market or put into service by the same manufacturer, importer or authorised representative as another model with a different model identifier.

2. For the purposes of Annexes II to V, the definitions set out in Annex I shall apply.

Article 3

Ecodesign requirements

The ecodesign requirements set out in Annex II shall apply from the dates indicated therein.

Article 4

Conformity assessment

1. The conformity assessment procedure as referred to in Article 8 of Directive 2009/125/EC shall be the internal design control system set out in Annex IV to that Directive or the management system set out in Annex V to that Directive.
2. For the purposes of conformity assessment pursuant to Article 8(2) of Directive 2009/125/EC, the technical documentation shall contain a copy of the product information provided in accordance with Annex II to this Regulation, and the details and the results of the calculations set out in Annex III to this Regulation.
3. Where the information included in the technical documentation for a particular model has been obtained:
 - (a) from a model that has the same technical characteristics relevant for the technical information to be provided but is produced by a different manufacturer, or
 - (b) by calculation on the basis of design or extrapolation from another model of the same or a different manufacturer, or both,

the technical documentation shall include the details of such calculation, the assessment undertaken by the manufacturer to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different manufacturers.

The technical documentation shall include a list of all equivalent models, including the model identifiers.

4. The technical documentation shall also include the information in the order and as set out in **Annex VI to Delegated Regulation (EU) 2023/XXXX [OP: insert reference to C(2023) 1672]**. For market surveillance purposes, manufacturers, importers or authorised representatives may, without prejudice to point 2(g) of Annex IV to Directive 2009/125/EC, refer to the technical documentation uploaded to the product database which contains the same information laid down in Delegated Regulation (EU) 2023/XXXX [OP: insert reference to C(2023) 1672].

Article 5

Verification procedure for market surveillance purposes

Member States shall apply the verification procedure laid down in Annex IV to this Regulation when performing the market surveillance checks referred to in Article 3(2) of Directive 2009/125/EC.

Article 6 ***Circumvention***

1. Manufacturers, importers or authorised representatives shall not place on the market products designed to alter their behaviour or properties when tested by Member State authorities performing checks on product compliance, in order to reach a more favourable result for any of the declared values of the parameters covered by ecodesign requirements included in this Regulation applicable at the time of the placing on the market of the products.

This includes, but is not limited to, products designed to be able to detect they are being tested (e.g. by recognising the test conditions or test cycle) and to automatically alter their behaviour or properties in response and products pre-set to alter their behaviour or properties at the time of testing.

2. Manufacturers, importers or authorised representatives shall not prescribe test instructions, specific for when these products are tested by Member State authorities performing checks on product compliance, that alter the behaviour or the properties of products in order to reach a more favourable result for any of the declared values of the parameters covered by ecodesign requirements included in this Regulation applicable at the time of the placing on the market of the products.

This includes, but is not limited to, prescribing a manual alteration of a product in preparation to the test that alters its behaviour or properties from the perspective of the normal use by the user.

3. Manufacturers, importers or authorised representatives shall not place on the market products designed to alter their behaviour or properties within a short period after putting the product into service leading to a worsening of any of the declared value of the parameters covered by ecodesign requirements included in this Regulation applicable at the time of the placing on the market of the products.

Article 7 ***Indicative benchmarks***

The indicative benchmarks for the best-performing products and technologies available on the market on *[OP: please insert date of entry into force of this Regulation]* are set out in Annex V.

Article 8 ***Review***

The Commission shall review this Regulation in the light of technological progress and present the result of this assessment including, if appropriate, a draft revision proposal, to the Consultation Forum established pursuant to Article 14(1) of Regulation (EU) 2017/1369 of the European Parliament and of the Council⁵ by *[OP: please insert the date = 4 years after the entry into force of this Regulation]*.

The review shall in particular assess:

⁵ Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU (OJ L 198, 28.7.2017, p. 1).

- (a) the need to revise the scope of this Regulation to reflect market evolution;
- (b) the appropriateness of including smart wearables in the scope of this Regulation and of laying down generic and specific requirements for these;
- (c) the appropriateness of setting specific ecodesign requirements on the resistance of slate tablets to accidental drops;
- (d) the appropriateness of increasing the stringency of the requirement on battery endurance in cycles;
- (e) the appropriateness of defining a standardised battery that could be used interchangeably across a range of mobile phones and slate tablets;
- (f) the need to set out requirements to enable or improve repair and upgradeability with used or third-party spare parts;
- (g) the need to revise or extend the list of spare parts, of spare parts availability per target group including professional repairers and end-users, and of repair information for which requirements are set out;
- (h) the inclusion of further chemical elements in the information requirements in Annex II;
- (i) the need to include reliability requirements related to foldable devices;
- (j) the appropriateness to impose requirements on the recycled content of materials;
- (k) the appropriateness of imposing further information requirements on spare part prices;
- (l) the option for manufacturers to make data for 3D printing of plastic components (e.g. battery compartment cover, buttons etc.) publicly available on a free-access website, either in addition to their obligation to make these spare parts available to professional repairers or end-users or as a means to fulfil this obligation;
- (m) the appropriateness to prohibit serialisation of parts;
- (n) the appropriateness of requirements regarding functionality updates to the operating system;
- (o) the appropriateness of the exemptions for foldable devices;
- (p) the appropriateness of setting ecodesign requirements for mobile phones with a flexible main display which the user can unroll and roll up partly or fully;
- (q) the appropriateness of extension of the periods for availability of updates to the operating system;
- (r) the appropriateness of extension of the period for availability of spare parts.

Article 9
Amendment to Regulation (EU) 2023/826

Regulation (EU) 2023/826 is amended as follows:

In point 3 of Annex II the entry ‘other equipment for the purpose of recording or reproducing sound or images, including signals or other technologies for the distribution of sound and image other than by telecommunications, but excluding electronic displays covered by Regulation (EU) 2019/2021 and projectors with mechanisms for exchanging the lenses with others with different focal length’ is replaced by the following:

‘other equipment for the purpose of recording or reproducing sound or images, including signals or other technologies for the distribution of sound and image other than by telecommunications, but excluding electronic displays covered by Regulation (EU) 2019/2021, cordless phones covered by Regulation (EU) 2023/XXXX [OP: please insert the number of this Regulation], and projectors with mechanisms for exchanging the lenses with others with different focal length.’

Article 10

Entry into force and application

This Regulation shall enter into force on the twentieth day following its publication in the Official Journal of the European Union.

It shall apply from [OP: please insert the date = 21 months from the date of entry into force of this Regulation]. Article 6 shall apply from [OP: please insert the date of entry into force of this Regulation]. This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 16.6.2023

For the Commission
The President
Ursula VON DER LEYEN