



Department for
Business, Energy
& Industrial Strategy

ECODESIGN REQUIREMENTS FOR EXTERNAL POWER SUPPLIES: DRAFT REGULATIONS

Consultation on the proposed regulations to
update ecodesign requirements for external
power supplies

Closing date: 15 October 2019



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Any enquiries regarding this publication should be sent to us at: EPSconsultation@beis.gov.uk

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General information

Why we are consulting

We are consulting on the draft Ecodesign for Energy-Related Products (External Power Supplies) Regulations 2020 (the 'draft regulations') to be made under the powers contained in the amended Ecodesign for Energy-Related Products Regulations 2010, as amended by the Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019. These draft regulations, published as part of this consultation, update existing UK ecodesign requirements for external power supplies, in line with what was agreed by the UK as a Member State at EU level in January 2019.

This consultation document describes and explains what we are trying to achieve with the draft regulations and asks whether stakeholders agree with our proposal to introduce updated UK ecodesign requirements for external power supplies from 1 April 2020. The consultation further asks whether stakeholders agree with our assessment of the costs and benefits of doing so, as set out in the Impact Assessment published as part of this consultation, and our assessment of the impacts of not regulating. It also asks whether stakeholders agree with our intention to review the draft regulations within five years of their coming into force.

It is anticipated that those wishing to respond to this consultation may include external power supply manufacturers, their authorised representatives, importers, trade bodies, consumer groups, environmental organisations and other civil society organisations. The consultation may also be of interest to those with an interest in energy efficiency and climate change. Since the draft Ecodesign for Energy-Related Products (External Power Supplies) Regulations 2020 will extend to England, Wales, Scotland and Northern Ireland, we welcome views from throughout the UK.

Following this consultation, we will consider whether revisions are needed to the draft regulations and will publish a final Impact Assessment alongside our decision.

Consultation details

Issued: 03 September

Respond by: 15 October

Enquiries to:

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Consultation reference: Ecodesign requirements for external power supplies: draft regulations

How to respond

We encourage respondents to make use of the online e-consultation wherever possible, when submitting responses as this is the Government's preferred method of receiving responses.

The e-consultation platform can be found at: beisgovuk.citizenspace.com/energy-efficiency/ecodesign-external-power-supplies.

However, responses sent to the above email or postal addresses will also be accepted.

For ease of reference, questions posed throughout the document are also listed together in a catalogue of questions at the end of this consultation.

Your response will be most useful if it is framed in direct response to the questions posed, though further comments and evidence are also welcome. To aid our analysis, please state 'yes' or 'no' to indicate whether you agree or disagree with each proposal. If you have information which supports your view, we invite you to provide details in support of your response.

Confidentiality and data protection

Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004).

If you want the information that you provide to be treated as confidential please tell us, but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable UK and EU data protection laws. See our [privacy policy](#).

We will summarise all responses and publish this summary on [GOV.UK](#). The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

Quality assurance

This consultation has been carried out in accordance with the government's [consultation principles](#).

If you have any complaints about the way this consultation has been conducted, please email: beis.bru@beis.gov.uk.

Context and Background Information

What is ecodesign?

1. The EU's ecodesign regulatory framework requires manufacturers of energy-related products to improve the performance of their products by meeting minimum energy efficiency requirements and various environmental criteria before they can place their products on the European market, including in the UK. This framework pushes industry to improve the energy efficiency and environmental performance of products and removes the least performing products from the market.
2. This regulatory framework represents one of the most cost-effective ways to reduce energy bills and carbon emissions and will help in the transition to a low carbon society whilst increasing economic growth. The Government's current estimates show that taken together with related energy labelling requirements which allow consumers to choose the most energy efficient products, ecodesign requirements will save around £100 for the average dual-fuel household on their energy bills in 2020, and lead to greenhouse gas emissions savings of 8 million tonnes of CO₂ in 2020.

UK withdrawal from the EU

3. Until the UK's withdrawal from the EU, ecodesign requirements for the UK market have been set at EU level through ecodesign regulations under the Ecodesign Directive.
4. The UK has always taken a leading role in pushing for both ambitious and realistic requirements, and the UK's departure from the EU will not change this. The UK remains firmly committed to this policy which minimises energy bills for households and businesses, reduces greenhouse gas emissions, reduces the adverse environmental impacts of products, creates a level playing field for industry, drives innovation, and supports the transition to a low carbon economy.
5. To provide clarity and ensure continuity in the event of a no deal, we have already introduced legislation¹ that would ensure that all existing minimum performance and labelling requirements for energy-related products in households and the commercial sector remain enforceable in the UK after exit in a no deal scenario. That legislation also allows us to introduce new or revised minimum performance and labelling requirements for energy-related products after the UK's exit from the EU in a no deal scenario.
6. The draft regulations set out in this consultation are a concrete demonstration of our continuous support to this policy and the commitment made in the Clean Growth Strategy to "*keep step with equivalent product standards wherever possible and appropriate, or even exceed them where it is in the UK's interest to do so*"² after exit.

¹ The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019. Available at: <http://www.legislation.gov.uk/ukxi/2019/539/contents/made>

² Clean Growth Strategy, [October 2017](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf). Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf

New Package of EU ecodesign regulations

7. Between September 2018 and January 2019, the UK, as an EU Member State, voted in favour of a new package of EU ecodesign regulations for eleven product groups (domestic refrigeration, lighting, electronic displays, household dishwashers, household washing machine and dryers, motors, transformers, external power supplies, welding equipment, commercial refrigeration and servers and data storage products).
8. In the event that the UK leaves the EU without a deal on 31 October 2019, this package of ecodesign regulations will not automatically apply in the UK since they will take effect after exit day, except for the new EU regulation on servers and data storage products which entered into force on 7 April 2019. We are therefore planning to bring forward domestic secondary legislation to update existing requirements in line with the requirements the UK helped shaped when a Member State.
9. Whilst most of the new EU regulations will apply from 2021, the new ecodesign regulation for external power supplies will take effect from April 2020. We are therefore consulting on the draft external power supplies regulations now. We intend to carry out consultation on the rest of the new package of EU ecodesign regulations in 2020.

Background on external power supplies

10. External power supplies are globally traded devices used to power a large variety of household and office products. They can either charge built-in batteries of electronic and electric devices such as mobile and cordless phones, notebook computers and tablets, or serve as the main continuous source of power for devices without built-in batteries such as stand-alone loudspeakers or modems and routers.
11. More than 80 million external power supplies are sold in the UK annually. The average UK household has five to ten of these products powering a variety of electronic devices³.
12. External power supplies placed on the UK market are currently subject to existing ecodesign regulation, Commission Regulation (EC) No. 278/2009⁴, which will be retained in UK law after exit. As noted above, however, the UK, together with other Member States, voted in favour of updating this regulation in January 2019.

³ Global External AC-DC Power Supply Market 2018, Forecast to 2023, Abstract, August 2018. Available at wiseguyreports.com.

⁴ <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:093:0003:0010:EN:PDF>

Consultation questions

Consultation already undertaken at EU and UK levels

13. Before revising the existing regulation on external power supplies, the EU carried out a lengthy consultative process. A review of the existing regulation was first carried out in the EU in 2013 followed by an additional assessment in January 2014. The conclusions of these studies and a draft revised regulation were discussed with stakeholders, including from the UK, in two meetings held in April 2013 and April 2015. Work on an Impact Assessment of the revised EU regulation started in 2015 and was finalised in 2018 following discussion with industry, including from the UK.
14. In addition to the consultations held at EU level, we consulted separately with UK stakeholders and carried out our own UK-specific cost-benefit analysis before voting in favour of the revised regulation on external power supplies in January 2019. Our final cost-benefit analysis of the revised EU regulation showed a net positive impact in the UK.
15. To ensure the revised EU requirements apply in the UK in the event of a no deal, we need to pass secondary legislation in the UK using powers under the Ecodesign for Energy-Related Products Regulations 2010, as amended by the Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019. These Regulations require the Secretary of State to consult when making product-specific regulations which is why we are now seeking views from stakeholders on the draft regulations and welcome responses to the questions below. We also welcome wider comments and any additional and relevant evidence.

New ecodesign requirements for external power supply

16. The draft Ecodesign for Energy-Related Products (External Power Supplies) Regulations 2020 annexed to this consultation set out updated ecodesign requirements for external power supplies that are in line with those agreed by the UK and other Member States at EU level in January 2019.
17. The draft regulations set new minimum energy efficiency requirements on the following aspects:
 - no-load power consumption (i.e. power consumed by an external power supply when it is plugged in but not connected to any device); and
 - minimum active efficiency (i.e. average efficiency when power is supplied to a device that is being used).

Additionally, the draft regulations set new requirements regarding information provided by manufacturers and importers. There are two target groups for the information:

- end users (to be informed by user manuals and free access websites); and

-
- market surveillance authorities conducting verification of products (to be informed by technical documentation).
18. Adopting these requirements would lead to estimated carbon savings of around 1 million tonnes of CO₂e between 2020 and 2029 in the UK, and 5,000 GWh of energy saved⁵. This is because external power supplies have a substantial environmental impact within the UK and present potential for improvement in terms of energy performance. This is due to the significant number traded each year and the technological progress since the current Commission Regulation (EC) No. 278/2009 was enacted.
 19. Our proposed approach would also mean aligning with the US Level VI Efficiency Standard which is the most ambitious standard to date. This would foster greater regulatory equivalence, promote the development of voluntary international standards, encourage innovation, and have the additional benefit of not imposing additional regulatory compliance costs onto manufacturers.
 20. Not legislating by contrast would mean UK manufacturers would be less incentivised to innovate and produce products that comply with the new EU requirements. This would result in missed opportunities in terms of carbon and energy bill savings. Further, for non-UK manufacturers who fail to plan and adjust to the new EU regulation, there may be excess supply of products that do not comply with the new EU regulation. These products may temporarily reach the UK market, impacting carbon and energy bill savings negatively.
 21. We are not proposing at this point in time to exceed the EU requirements. Given the new EU requirements apply from 1 April 2020, our immediate priority, in the event of a no deal, is to provide clarity and continuity to stakeholders. We are also satisfied that our preferred option would align us with the most ambitious global standard to date, i.e. the US Level VI Efficiency Standard, and consider it unlikely that going further would provide cost-effective energy savings. We will however keep this under review.

Q.1 Do you agree with our intention to introduce, in the draft regulations, updated UK ecodesign requirements for external power supplies that are in line with the revised EU requirements the UK agreed and helped shape before exit? If you do not agree, please provide reasons supported by evidence where possible.

Timing of the draft regulations

22. The EU regulation set out requirements that will be applicable from 1 April 2020 and we propose to keep in line with this implementation date. This will provide certainty and clarity to businesses. This will also prevent less efficient and more polluting external power supplies being placed on the UK market and allow the UK to realise the full potential of energy and carbon emission savings from these products.
23. Given the timescales associated with the consultation, the draft regulations are only likely to be finalised and laid in the UK Parliament a very short time before they are to take effect on 1 April 2020. On the assumption that the requirements in the draft

⁵ Impact Assessment for the draft Ecodesign for Energy-Related Products (External Power Supplies) 2020

regulations remain the same as those adopted at EU level before exit, we think that manufacturers will be well prepared for the 1 April 2020 implementation date and as such will not be impacted significantly by the lack of lead time between the legislation being laid in Parliament and it taking effect. However, we would be keen to understand any possible issues, particularly for small and micro businesses which might be affected by this legislation.

Q.2 Do you agree with our intention to implement the revised UK ecodesign requirements for external power supplies on 1 April 2020 in line with the EU implementation date?

Q.3 Do you agree that 1 April 2020 is an achievable implementation date for small and micro businesses? If you do not agree, what support or allowances could be given to small and micro businesses to help them meet this implementation date?

Review of the draft regulations

24. As required by the Ecodesign for Energy-Related Products Regulations 2010, as amended by the Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019, the draft regulations set a date for the evaluation and possible revision of the regulations.
25. The EU regulation on external power supplies sets out a review period of three years from entry into force. Our proposal is to set the review within five years from entry into force. This extra period of time would allow us to build on the EU review and supplement with UK specific data before deciding whether to introduce more stringent ecodesign requirements.

Q.4 Do you agree with our intention, as set out in the draft regulations, to review the regulations five years from entry into force? If you do not agree, please provide reasons supported by evidence where possible.

Impact Assessment of the draft regulations

26. An Impact Assessment for the draft regulations has been annexed to this consultation. The Impact Assessment considers the impact of the draft regulations on individuals, groups and businesses with the aim of understanding the overall impact on society.
27. We would welcome any comments and additional evidence on the analysis set out in this Impact Assessment, such as potential costs, in particular to UK businesses, as well as any benefits and risks arising from the draft regulations.

Q.5 Do you agree with our assessment of the costs and benefits of introducing updated UK ecodesign requirements for external power supplies that are in line with the revised EU requirements the UK agreed and helped shape before exit? Have any impacts of introducing these requirements been overlooked?

Q.6 Do you agree with our assessment of the impact of not introducing updated UK ecodesign requirements for external power supplies that are in line with the revised EU

requirements the UK agreed and helped shape before exit? Have any impacts of not introducing these requirements been overlooked?

Q.7 Have costs to UK businesses in general been assessed adequately? Can you provide any evidence in relation to the size of the external power supply manufacturing base in the UK? Can you provide any evidence to support the Small and Micro Business Assessment (SaMBA) in the Impact Assessment, in particular in relation to the number of UK-based small and micro external power supply manufacturers?

Next steps

28. Responses to this consultation will be taken into account when taking the policy forward, and following the analysis of responses, the draft Ecodesign for Energy-Related Products (External Power Supplies) Regulations 2020 may be revised.
29. Since the draft regulations lay down ecodesign requirements which are identical with those adopted by the EU before exit, they will be made using the Parliamentary negative resolution procedure, meaning they will become law without parliamentary debate unless there is an objection from either House of Parliament. This is in line with the Ecodesign for Energy-Related Products Regulations 2010, as amended by the Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019.

Catalogue of questions

Q.1 Do you agree with our intention to introduce, in the draft regulations, updated UK ecodesign requirements for external power supplies that are in line with the revised EU requirements the UK agreed and helped shape before exit? If you do not agree, please provide reasons supported by evidence where possible.

Q.2 Do you agree with our intention to implement the revised UK ecodesign requirements for external power supplies on 1 April 2020 in line with the EU implementation date?

Q.3 Do you agree that 1 April 2020 is an achievable implementation date for small and micro businesses? If you do not agree, what support or allowances could be given to small and micro businesses to help them meet this implementation date?

Q.4 Do you agree with our intention, as set out in the draft regulations, to review the regulations five years from entry into force? If you do not agree, please provide reasons supported by evidence where possible.

Q.5 Do you agree with our assessment of the costs and benefits of introducing updated UK ecodesign requirements for external power supplies that are in line with the revised EU requirements the UK agreed and helped shape before exit? Have any impacts of introducing these requirements been overlooked?

Q.6 Do you agree with our assessment of the impact of not introducing updated UK ecodesign requirements for external power supplies that are in line with the revised EU

requirements the UK agreed and helped shape before exit? Have any impacts of not introducing these requirements been overlooked?

Q.7 Have costs to UK businesses in general been assessed adequately? Can you provide any evidence in relation to the size of the external power supply manufacturing base in the UK? Can you provide any evidence to support the Small and Micro Business Assessment (SaMBA) in the Impact Assessment, in particular in relation to the number of UK-based small and micro external power supply manufacturers?

The content of the draft regulations

30. The draft regulations are attached at Annex A and key proposed requirements are set out below.

Scope of this instrument

31. Regulation 3 establishes the scope of the draft regulations and provides an exhaustive list of products to which this instrument does not apply. The latter for instance includes external power supplies for medical devices and voltage converters.

Ecodesign requirements

32. Regulation 4 refers to Schedule 2 of these draft regulations which sets out the proposed ecodesign requirements (energy efficiency and information requirements) that external power supplies placed on the UK market must comply with.
33. Table 2 of Schedule 2 sets out the proposed maximum values for no-load condition power consumption (i.e. power consumed by a power charger when it is plugged in but not connected to any device).

Table 2 of Schedule 2: Maximum values for no-load condition power consumption

Type of external power supply	PO ≤ 49.0 W	PO > 49.0 W
(i) AC power input to AC output (unless falling within rows (iii) or (iv))	0.21 W	0.21 W
(ii) AC power input to DC output (unless falling within rows (iii) or (iv))	0.10 W	0.21 W
(iii) Low voltage external power supply	0.10 W	0.21 W
(iv) Multiple voltage output external power supply	0.30 W	0.30 W

34. Table 3 of Schedule 2 sets out the requirements on minimum average active efficiency (i.e. average efficiency when power is supplied to a device that is being used).

Table 3 of Schedule 2: Minimum values for average active efficiency

Type of external power supply	PO ≤ 1.0 W	1 W < PO ≤ 49.0 W	PO > 49.0W
(i) AC power input to AC output (unless falling within rows (iii) or (iv))	$0.5 \cdot PO/1W + 0.160$	$0.071 \cdot \ln(PO/1W) - 0.0014 \cdot PO/1W + 0.67$	0.880
(ii) AC power input to DC output (unless falling within rows (iii) or (iv))	$0.5 \cdot PO/1W + 0.160$	$0.071 \cdot \ln(PO/1W) - 0.0014 \cdot PO/1W + 0.67$	0.880
(iii) Low voltage external power supply	$0.517 \cdot PO/1W + 0.087$	$0.0834 \cdot \ln(PO/1W) - 0.0014 \cdot Po/1W + 0.609$	0.870
(iv) Multiple voltage output external power supply	$0.497 \cdot PO/1W + 0.067$	$0.075 \cdot \ln(PO/1W) + 0.561$	0.860

35. Table 4 of Schedule 2 mandates that the manufacturer must state the output power, output voltage and output current on the nameplate of a product.

Table 4 of Schedule 2: Nameplate information

Nameplate information	Value and precision	Unit
Output power	X.X	W
Output voltage	X.X	V
Output current	X.X	A

36. Paragraph 5 of Schedule 2 of the draft regulations sets out the information that manufacturers, importers, or authorised representatives must provide in their instruction manuals for users and free access websites.

Table 5 of Schedule 2: Instruction manual and website information

Information to be published	Value and precision	Unit	Additional requirements
Manufacturer's name or trade mark, commercial registration number, and address.	-	-	-
Model identifier	-	-	-
Input voltage	X	V	Specified by manufacturer. Must be a value or range.
Input AC frequency	X	Hz	Specified by manufacturer. Must be a value or range.
Output voltage	X.X	V	Nameplate output voltage. Must indicate whether AC or DC.
Output current	X.X	A	Nameplate output current.
Output power	X.X	W	Nameplate output power.
Average active efficiency	X.X	%	Declared by the manufacturer based on the value calculated as the arithmetical mean of efficiency at load conditions 1 to 4. Where multiple average active efficiencies are declared for multiple output voltages available at load condition 1, the value declared for the lowest output voltage must be published.
Efficiency at low load (10%)	X.X	%	Declared by manufacturer based on the value calculated at load condition 5. External power supplies with nameplate output power of 10W or less are exempt from this requirement. Where multiple efficiencies at low load are declared for multiple output voltages available at load condition 1, the value declared for the lowest output voltage must be published.
No load condition power consumption	X.XX	W	Declared by manufacturer based on the value measured for load condition 6.

37. Table 6 of Schedule 2 sets out the information that the manufacturer must declare in the technical documentation required for the assessment of the conformity of the product with the requirements in the draft regulations.

Table 6 of Schedule 2: Information required in technical documentation for conformity assessments

Reported quantity	Unit	PO > 10 W	PO ≤ 10 W
Root mean square output current	mA	Measured at load conditions 1 to 5.	Measured at load conditions 1 to 4.
Root mean square output voltage	V		
Active mode output power	W		
Root mean square input voltage	V	Measured at load conditions 1 to 6.	Measured at load conditions 1 to 4 and load condition 6.
Root mean square input power	W		
Total harmonic distortion of the input current			
True power factor			
Power consumed	W	Calculated at load conditions 1 to 5, measured at load condition 6.	Calculated at load conditions 1 to 4, measured at load condition 6.
Active mode efficiency	%	Calculated at load conditions 1 to 5.	Calculated at load conditions 1 to 4.
Average active efficiency	%	Arithmetical mean of efficiency at load conditions 1 to 4.	

Conformity assessment

38. Regulation 5 sets out the two procedures manufacturers can choose to assess whether an external power supply complies with the draft regulations. These are:

- the internal design control system procedure (procedure by which a manufacturer compiles a technical documentation file for each product to allow market surveillance authority to assess the conformity of the product), and;
- the management system procedure (procedure by which a manufacturer can use its own management system to demonstrate compliance, under certain conditions)

These procedures are defined in the amended 2010 Regulations.

Verification procedure for market surveillance purposes

39. Regulation 6 refers to Schedule 3 of these draft regulations which lays out the verification procedure for market surveillance purposes.
40. It is proposed that the appointed market surveillance authority (MSA), which in the UK is the Office for Product Safety and Standards, must initially test a single unit of the product to be verified. If necessary, it is proposed that the MSA must test three additional units of the model to be verified or three additional units of equivalent models.

Measurements and calculations

41. Regulation 7 sets out that the measurements and calculations made for the purposes of compliance and verification of compliance with the requirements in these draft regulations must either be made using:
 - designated standards - designated standards replace EU harmonised standards and are used as a way to demonstrate conformity with UK ecodesign requirements in the same way that EU harmonised standards are used as a way to demonstrate conformity with EU ecodesign requirements; or
 - other reliable, accurate and reproducible methods which take into account the generally recognised state-of-the-art.

Review of the draft regulations

42. Regulation 8 sets out the review process of the draft regulations and proposes that the Secretary of State publishes a report stating whether or not these draft regulations should be amended, at the latest by 1 April 2025.

Annexes

These Annexes are published as separate documents alongside this consultation.

- Annex A: Text of the draft Ecodesign for Energy-Related Products (External Power Supplies) Regulations 2020
- Annex B: Impact Assessment

This consultation is available from: www.gov.uk/government/consultations/ecodesign-requirements-for-external-power-supplies-draft-regulation

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