

Open Public Consultation on the Electromagnetic Compatibility Directive (EMCD)

Fields marked with * are mandatory.

Introduction

1. Background information for EU citizens and stakeholders:

What is electromagnetic compatibility? Electromagnetic compatibility (EMC) is the ability of electrical equipment and fixed installations (combining different pieces of electrical equipment) to function well in their electromagnetic environment so that it:

- 1) does not introduce intolerable electromagnetic disturbances to other equipment in that environment; and
- 2) has a level of immunity to, and can operate as intended in the presence of, electromagnetic disturbance, without degradation.

What is electromagnetic disturbance? Any electromagnetic phenomenon which may degrade the performance of equipment (for example, electromagnetic noise, an unwanted signal or a change in the propagation medium itself etc.)

What is the 'electromagnetic environment'? All electromagnetic phenomena are observable in a given location. EMC implies limiting the unintentional generation, propagation and reception of electromagnetic energy which could cause unwanted effects such as electromagnetic interference (EMI). This may result in physical damage to equipment.

What is electromagnetic immunity (EMI) - "immunity"? The absence of electromagnetic phenomena that could prevent a product from functioning normally. Equipment should have a level of immunity to operate in the presence of electromagnetic disturbance, without degradation.

2. The Electromagnetic Compatibility Directive (EMCD), Directive 2014/30/EU

The EMCD is a piece of EU legislation which: (a) applies, subject to specific exceptions, to electrical equipment; (b) sets the essential requirements for electromagnetic compatibility (see the definitions above). There has been an EU legal framework in place since 1989, and the 2014 Directive is the most recent piece of EU law.[1] There are certain categories of equipment which are not covered by the EMCD (e.g. medical devices, certain vehicle, airborne and maritime equipment, etc.) but their EMC might be specifically governed by other EU legislation. The scope and purpose of this consultation is about the EMCD and not about that other specific EU legislation.

What are the EMCD's objectives and its benefits?

The purpose is to ensure the functioning of the internal market by requiring equipment to comply with an adequate level of electromagnetic compatibility. Unlike other industrial product legislation, the focus is not directly on the safety of users, as the EMCD does not concern the effects of the electromagnetic emissions

on human health, which is covered in other EU legislation. Rather, the focus is on ensuring that equipment within scope: (a) does not degrade the performance of other equipment and; (b) performs as intended in the presence of electromagnetic disturbance. A key benefit is that the national authorities shall, under EMCD, prevent electrical equipment from being placed on the market or made available when it does not meet these requirements (i.e. if it is going to disturb or it will not be immune from disturbance).

Which categories of electrical equipment are within the EMCD's scope? The scope includes: 1) "apparatus" without limitation of voltage or frequency, including electrical equipment and domestic appliances, such as fridges and microwave ovens; and 2) "fixed installations" i.e. when there is a combination of different types of electrical equipment (e.g. large TV screens and electronic signage, solar panel structures with inverters, telecoms networks).

What does this mean for manufacturers? Manufacturers must meet the "essential requirements" before goods are placed on the European market. This is to ensure that the electromagnetic compatibility of equipment does not create undue disturbance such that it would stop other equipment from working properly, and/ or interfere with other equipment, and performs as intended in the presence of an electromagnetic disturbance.

Purpose of the Public Consultation: Gather feedback from any EU citizens that are concerned about EMC-related issues, and also relevant stakeholders wishing to input to the Study to Support an Evaluation of the Electromagnetic Compatibility (EMC) Directive (2014/30/EU). It is important for the European Commission to develop an understanding of how well the Directive is working across the EU, and whether particular types of equipment still pose a problem, or not. All interested parties are invited to provide their views.

Who should respond to the consultation? Manufacturers and other economic operators in the field of electrical equipment and household appliances and installations; market surveillance and enforcement authorities; notified bodies and conformity assessment bodies; and any other associations of stakeholders or experts in the field. EU citizens may also express their views.

Stakeholders wishing to contribute more detailed feedback may also (or alternatively) participate in a targeted consultation. Should you wish to contribute in this regard, please send an email to <mailto:mwhittle@cses.co.uk>

Why should EU citizens participate in this consultation? The EMCD covers everyday household appliances and other electrical products. Some products have been identified as having had disturbance issues (e.g. plasma TVs, powerline tools, microwaves and amateur radios).

Queries regarding the public consultation: Should you have any questions regarding this stakeholder consultation, please send an email to <mailto:mwhittle@cses.co.uk>

[1] See https://ec.europa.eu/growth/sectors/electrical-engineering/emc-directive_en for further details.

About you

* Language of my contribution

- Bulgarian
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- Gaelic
- German
- Greek
- Hungarian
- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business organisation
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority

- Trade union
- Other

* First name

* Surname

* Email (this won't be published)

* Scope

- International
- Local
- National
- Regional

* Organisation name

255 character(s) maximum

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

* Country of origin

Please add your country of origin, or that of your organisation.

- Afghanistan
- Åland Islands
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Djibouti
- Dominica
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Eswatini
- Ethiopia
- Falkland Islands
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Libya
- Liechtenstein
- Lithuania
- Luxembourg
- Macau
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Martinique
- Mauritania
- Mauritius
- Mayotte
- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Saint Martin
- Saint Pierre and Miquelon
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- São Tomé and Príncipe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain

- Belize
- Benin
- Bermuda
- Bhutan

- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria

- Burkina Faso
- Burundi

- Cambodia

- Cameroon

- Canada
- Cape Verde
- Cayman Islands

- Central African Republic
- Ghana
- Gibraltar
- Greece
- Greenland

- Grenada
- Guadeloupe

- Guam

- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau

- Guyana

- Haiti
- Heard Island and McDonald Islands

- Honduras
- Hong Kong

- Hungary

- Iceland

- India
- Indonesia
- Iran

- Iraq
- Montserrat
- Morocco
- Mozambique
- Myanmar /Burma
- Namibia
- Nauru

- Nepal

- Netherlands
- New Caledonia
- New Zealand
- Nicaragua

- Niger

- Nigeria
- Niue

- Norfolk Island
- Northern Mariana Islands
- North Korea

- North Macedonia
- Norway
- Oman
- Pakistan

- Palau
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Sweden
- Switzerland

- Syria

- Taiwan
- Tajikistan
- Tanzania
- Thailand

- The Gambia

- Timor-Leste
- Togo

- Tokelau
- Tonga

- Trinidad and Tobago
- Tunisia

- Turkey
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu

- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

*** Publication privacy settings**

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only your type of respondent, country of origin and contribution will be published. All other personal details (name, organisation name and size, transparency register number) will not be published.

Public

Your personal details (name, organisation name and size, transparency register number, country of origin) will be published with your contribution.

I agree with the [personal data protection provisions](#)

Questionnaire

* I am giving my contribution as a / an:

- User of electric equipment/apparatus/fixed installation (individual citizen or other types of organisations)
- Economic operator (manufacturer, distributor, importer, others...)
- Radio Amateur organisation or other citizen-based organisation
- Industry association
- Market surveillance authority (MSA)
- National/local authority (different from MSA)
- Notified body for the EMCD
- Laboratory in the field
- EU standardisation organisation
- National standardisation organisation
- Consumer organisation
- Environmental organisation
- Non-governmental organisation (NGO)
- Academic / research institution
- Other (please specify)

Other, please specify:

The type of company

- Manufacturer
- Wholesaler / distributor

- Importer

In which sector do you operate? Please specify:

What types of products do you import and / or distribute?

Awareness and familiarity with electromagnetic disturbance and the EMCD:

This section considers levels of awareness and the relevance of issues related to electromagnetic compatibility.

1. Are you familiar with the issue of electromagnetic compatibility / disturbance in electrical products?

- Yes
- To some extent
- No
- Don't know

2. How concerned are you as a user about the following issues relating to electromagnetic compatibility regarding: (1) electrical apparatus (e.g. electrical equipment and household appliances like microwave ovens) and/or (2) fixed installations combining more than one piece of equipment (e.g. giant TV screens for events, power supply networks; large telecommunications networks; etc.):

Please note that antennas are not included in the EMCD's scope.

Please tick one box per row.

	Very concerned	Somewhat concerned	Not concerned at all	Don't know
Electromagnetic emissions from apparatus (electrical devices/ equipment)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electromagnetic emissions from fixed installations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Electromagnetic immunity in apparatus (electrical devices/ equipment)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electromagnetic immunity in fixed installations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Have you ever experienced any problems with electromagnetic disturbance when using electrical equipment (e.g. electronic products, household appliances)?

- Yes
- No
- Don't know

4. If yes, which types of equipment caused the disturbance? Please provide any examples of problematic apparatus (such as electrical equipment and household appliances) or fixed installations in the box below. If possible, comment from an electromagnetic emissions and immunity perspective:

5. Do the disturbance-related problems appear to happen as a result of the functioning of:

- A single piece of electrical equipment
- Different pieces of electrical equipment when used in close proximity
- A combination of different pieces of electrical equipment integrated in a fixed installation

6. How would you rate the overall severity of the electromagnetic disturbance and emissions experienced?

- Extremely severe
- Severe
- Not severe at all
- Don't Know / Not Applicable

Please explain your response, if you wish below:

7. How effective has the EMC Directive been in achieving the following objectives?

	Very effective	Somewhat effective	Ineffective	Don't know
Reducing electromagnetic disturbance and the incorrect functioning of electric equipment placed on the European single market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthening immunity of new apparatus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating the development of harmonised standards on electromagnetic compatibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitate intra-EU circulation of electrical equipment within the single market (e.g. import/ export)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promoting good engineering practices in the design of fixed installations to prevent disturbance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. In the last 10 years, the electrical equipment market has changed dramatically (for example due to e-commerce, the market entry of new economic operators). To what extent do you think that the EMCD is still relevant?

- High level of relevance
- Some relevance
- Limited relevance
- No relevance at all
- Don't know

9. How would you rank the following benefits of the EMCD?

	High level of benefit	Some degree of benefit	No benefit at all	Don't know
Less electrical equipment being placed on the European market that could stop other electrical apparatus from operating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reducing EMC-interfering field strength	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prevention and/ or reduction of accidents linked to EMC disturbance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reducing the risk of disturbance for new and emerging technologies (e.g. self-driving and connected cars, digital TVs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitate intra-EU movement of electrical equipment (e.g. import/ export)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. To what extent in your view does the EMC Directive continue to be relevant to have EU legislation for electromagnetic compatibility of apparatus and installations, as opposed to addressing these issues in each Member State?

- High level of relevance
- Some relevance
- Limited relevance
- No relevance at all
- Don't know

Coherence

11. How coherent is the EMCD with other applicable industrial product legislations (e.g. the Machinery Directive (2006/42/EC), the Low Voltage Directive (2014/35/EU), Radio Equipment Directive (2014/53/EU), etc..)?

Please explain your response.

Efficiency

12. To what extent have the following benefits been achieved as a result of the EMCD's implementation? Please tick one box for each of the following rows?

	Strong benefits	Some benefits	Neutral	Disbenefits	Don't know
Reducing the incidence of electromagnetic disturbance leading to the incorrect functioning of electrical equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulating the application of good engineering practices for fixed installations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving harmonised standards on electromagnetic compatibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthening electromagnetic immunity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other - please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain the nature of any benefits of the Directive below:

13. For each of the following types of costs, please indicate how costly is compliance with the EMC Directive's requirements: For each type of cost, please indicate the level of costs by ticking one box only per row:

Types of costs (below)	Very costly	Somewhat costly	Neutral	Not costly at all	Don't know
Familiarisation with the legal obligations (internally or hire a lawyer)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Costs of development (EMC relevant)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conformity assessment to produce the technical file	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Costs of production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Costs of keeping the technical documentation updated for 10 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Costs of an authorized representative if applicable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other – please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Is the EMC Directive clear and easy to apply?

- Very clear and easy to apply
- Quite clear and easy to apply
- Neutral clarity and ease of application
- Quite unclear and difficult to apply
- Very unclear and difficult to apply
- Don't know

15. How burdensome is the EMC Directive to implement, monitor and enforce?

- Very burdensome
- Somewhat burdensome
- Neutral
- Not burdensome at all
- Don't know

16. To what extent do the benefits of the EMC Directive outweigh the costs (or vice versa) in your view?

- The benefits greatly outweigh the costs
- The benefits somewhat outweigh the costs
- The benefits and costs are about even
- The costs somewhat outweigh the benefits
- The costs greatly outweigh the benefits
- Don't know

17. To what extent do you experience difficulties in applying the EMC Directive?

- To a great extent
- To some extent
- To a limited extent
- Not at all
- Don't know

Please explain

18. Overall, do you consider that the costs your organisation incurs as a result of the EMC Directive are proportionate to the benefits?

- Yes, the costs are proportionate
- Somewhat proportionate
- Not that proportionate
- No, the costs are disproportionate
- Don't know

19. To what extent are harmonised standards effective in ensuring compliance with the EMC Directive?

- Yes, highly effective
- Yes, somewhat effective
- No, not effective at all
- Don't know

Please explain your response regarding why standards are sufficient / insufficient if you wish to do so.

If you wish to comment further on any of the issues raised in this consultation, please do so in the optional open response box below.

You may comment in any official EU language.

Please upload any documents you wish to submit in response to this public consultation and the ongoing evaluation of the EMC Directive.

The maximum file size is 1 MB

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

Can we contact you directly to clarify your answers?

- Yes
- No

THANK YOU FOR TAKING PART IN THE STUDY AND FOR YOUR INPUT.