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RADIO SPECTRUM POLICY GROUP

RSPG Opinion on the role of radio spectrum policy to help combat climate change

RSPG Secretariat, Avenue de Beaulieu 33, B-1160, Bruxelles, office BU33 7/65
Telephone: direct line (+32-2)29.21.261, switchboard 299.11.11
E-mail: cnect-rspg@ec.europa.eu Web-site: http://rspg-spectrum.eu
Web-site CIRCABC : https://circabc.europa.eu/ui/group/f5b44016-a8c5-4ef6-a0bf-bc8d357debcb

Introduction

The EU has set ambitious measures and goals to reduce its greenhouse gas emissions in order to tackle climate change. The RSPG supports the fight against climate change and believes that tackling the negative consequences of climate change is of utmost importance. Therefore, in its Programme of activities for the years 2020 and beyond the RSPG responded by establishing a work item to focus on spectrum policy aspects which are closely related to the efforts of ensuring climate-neutrality. In particular the RSPG was requested to examine how spectrum policy can help to combat climate change, including by consulting with the relevant stakeholders.

The RSPG published a Report on this subject in June 2021. The Report described the aspects within spectrum management that relate to climate change, and set out possible options in radio spectrum policy in order to help monitor climate change. The Report considered how radio spectrum could enable various sectors to reduce their impact on the environment and described some of the steps that the electronic communications sector itself could undertake in order to reduce its impact on the environment. The Report reflected on how the steps taken by the telecommunications industry could be assessed, verified and supported.

This Opinion subsequent to the Report contains recommendations as to what concrete actions can be taken at EU level.

RSPG Opinion

RSPG recognises the fight against climate change as an important policy objective in spectrum management and will – within its mandate – continue to work in that direction.

Methodologies to assess the impact of ECS[1] wireless technologies on climate change

1) RSPG invites the European Commission with Member States to promote the development of methodologies to assess the impact of ECS wireless technologies on climate change (i.e. Energy Efficiency, Circular Economy, etc.) with the involvement of ECS stakeholders and all interested parties (including citizens) and, where appropriate, with the support of the European Telecommunications Standardisation Institute (ETSI) including if needed CEN, CENELEC. Those methodologies should include a focus on ECS radio component (base stations and user terminals) including the impact of frequency bands.
2) RSPG invites the European Commission to always take energy efficiency and other climate related aspects into account when funding research within the wireless sector.
3) RSPG invites the MS to initiate national climate and environmental strategies within the ICT sector and urges the European Commission to put forward an EU wide strategy based on the national strategies.

Use of environmentally friendly energy sources and self-regulation

4) RSPG invites stakeholders which manufacture and operate any equipment, which uses frequencies, to use environmentally friendly energy sources.
5) The RSPG welcomes self-regulation and other voluntary initiatives of the wireless ECS sector to incentivise an increased percentage share of electricity consumed coming from environmentally friendly energy sources including renewable energy sources.
6) The RSPG welcomes wireless ECS sector cooperation and coordination to develop energy efficient standards and to design services and equipment based on such standards.
7) RSPG invites the European Commission to investigate and if necessary propose EU actions to enable MS inter-alia to enhance voluntary initiatives and self-regulatory measures, aiming at combatting climate change within the wireless sector. Such actions should follow the criteria for all regulatory actions such as non-discrimination. They should be based on relevant facts and analysis, so as to use the most efficient measure from an overall societal point of view. The principle of service and technological neutrality should underpin any measure, and any such measure should be general rather than specific.

[1] Electronic Communications Service (ECS) means a service normally provided for remuneration via electronic communications networks, which encompasses, with the exception of services providing, or exercising editorial control over, content transmitted using electronic communications networks and services, the following types of services: (a) 'internet access service' as defined in point (2) of the second paragraph of Article 2 of Regulation (EU) 2015/2120; (b) interpersonal communications service; and (c) services consisting wholly or mainly in the conveyance of signals such as transmission services used for the provision of machine-to-machine services and for broadcasting.

Harmonised spectrum for purposes related to combatting climate change

After a review of existing processes to gather the spectrum needs and various sectoral needs to combat against climate change

8) RSPG points to the fact that
    a. At this stage, current harmonised spectrum could respond to various technology needs, stakeholders' strategies and development trends
    b. spectrum needs and demands to help combat against climate change can change over time due to a number of factors, in particular the implementation of energy regulations resulting from the Green Deal. It is consequently important to regularly review the forecast long-term spectrum needs and spectrum demands aimed at combating climate change.
9) RSPG confirms that all the sectors, which can benefit by using wireless technologies in their efforts to reduce emissions, already have a process available (either at international or European or national level) in order to address either future specific spectrum needs or spectrum demands triggered by the evolution of technology.

In addition, RSPG is of the view that:

10) Any further request for spectrum harmonisation should be addressed via the current mechanisms in place.
11) The common ITU-R process should be used for sectors where the sectoral need for spectrum is mainly worldwide (e.g. Galileo, GMES, scientific services). EU Member States should express these needs in the regular ITU-R study work. This should by actively supported by the European Union in its role as ITU-R Sector Member.
12) In the case that potential modifications to the Radio Regulations are identified, the WRC preparatory process (CEPT) has to be used. This process will be accompanied by a respective RSPG Opinion on WRC to assist the European Commission in developing a proposal for a Council Decision on the EU position for WRC.
13) In all other cases, the common ETSI-CEPT cooperation is recommended. This cooperation in practice also includes the possibility for the European Commission to issue mandates to CEPT and ETSI.
14) The perceived spectrum needs and requests from the sectors which can benefit from wireless technologies in their efforts at reducing emissions need to be treated with caution. This is because processes to consider such requests may already have been triggered within the current mechanisms in place.

Further considerations on ensuring spectrum is made available to support initiatives to combat climate change

15) Member States should ensure the availability of spectrum for public transport purposes, as appropriate.
16) The RSPG recommends that Member States better engage in highlighting the potential of current harmonised spectrum to support the development of smart meters and smart grids.

17) RSPG notes the development of Wireless Power Transfer, including the evolution of the automotive sector, and recommends to continue analysing the coexistence with existing radiocommunication services.

Spectrum used in weather forecasting, monitoring climate change and gathering long-term climate related data

RSPG is of the view that:

18) Member States should recognise that monitoring of climate change, collecting data for weather forecasting or gathering climate-related data are important tools to provide evidence related to combatting climate change and facilitate the response to its consequences. In consequence, Member States and the European Commission should ensure long-term spectrum availability and protection for radio systems supporting them, where appropriate.
19) RSPG notes that bands used for gathering climate-related data by passive sensing require particular protection, as recognised by international regulation.
20) Members States should cooperate actively in order to assess and solve interference which impacts upon weather forecasting, monitoring of climate change or collecting data for weather forecasting and gathering climate-related data. Member States should cooperate actively to implement corrective actions, including at international level as appropriate, in order to avoid long-term interference situations. The European Commission and Member States, where appropriate, should cooperate on implementing EU regulatory measures or, as appropriate, improvement of the EU regulatory framework

Concerns regarding effective functioning of existing 5.6 GHz meteorological climate monitoring systems

21) The RSPG recognises the issue of interference into 5.6 GHz meteorological radars and the strategic importance of resolving the issue in order to preserve the confidence of incumbent spectrum users on the innovative sharing solutions and EU framework.

22) RSPG is of the view that due to the complexity of the regulatory framework for RLAN and Met Radars in the 5.6 GHz band, which involves the radio regulatory framework, the Radio Equipment Directive and harmonised standards, as well as well-functioning market surveillance carried out by the authorities of the Member States to identify and take off the market non-compliant RLAN devices, initiatives are needed to remedy this interference situation, including initiatives at a policy level. RSPG welcomes the initiative to analyse various options identified at this stage, including those undertaken by CEPT and ADCO RED. There is a need to establish a set of concrete actions, including from the European Commission's side, to be implemented within the short/medium timeframe in order to reverse the current trend.

Wireless ECS: Spectrum management actions and the EECC framework

23) RSPG recalls that the flexibility given by the EECC framework under a general interest objective should be maintained in order to address climate protection.
24) RSPG recognises that the availability of large contiguous frequency blocks could avoid the energy consumption associated with the support of multiple carriers and carrier aggregation. Member States may strive to improve the energy efficiency of networks by making available spectrum in the largest blocks possible where appropriate.

25) The RSPG considers that Member States should make spectrum available in a timely manner for the development of innovative services to mitigate climate change.
26) The RSPG recommends that Member States assess how active or passive infrastructure sharing may help reduce the carbon footprint of wireless ECS while maintaining competition objectives. Based on the results of these assessments, Member States should consider enabling infrastructure sharing among operators.
27) The RSPG recognises that the current EU framework to facilitate the roll-out of indoor networks may also contribute to combat climate change.
28) The RSPG recommends that the European Commission, and where appropriate the Member States, determine whether ECS Network operators should be required to report on their emissions and the actions they are taking to achieve the Union's environmental targets. The RSPG will contribute to any such determinations within its field of knowledge and expertise. If legal measures are put in place in respect of such reporting, the RPSG recommends that a harmonised approach to the reporting is adopted across the European Union. Any necessary assessments (in line with recommendation 1 above) should be made as regards the measurement methodologies to obtain reported data.