

## **EUROPEAN COMMISSION**

Directorate-General for Communications Networks, Content and Technology

Electronic Communications Networks and Services Radio Spectrum Policy Group RSPG Secretariat

Brussels, 5 February 2020

RSPG20-006 FINAL

## RADIO SPECTRUM POLICY GROUP

## State of play regarding award of 5G pioneer bands

The attached table represents information available to the European Commission regarding the state of play on award processes for the 5G pioneer bands identified by the RSPG. Sources include the 5G Observatory, the RSPG awards calendar and information provided by RSPG members themselves. The information relates the situation as at January 28 2020.

| Country  |                     | 700 MHz        |   |                     | 3.4-3-8 GHz        |   | 24.25-27.5 GHz                 |                |   |
|----------|---------------------|----------------|---|---------------------|--------------------|---|--------------------------------|----------------|---|
|          | Public consultation | Peer<br>review | Award   | Public consultation | Peer<br>review     | Award   | Public consultation            | Peer<br>review | Award   |
| Austria  | September<br>2019   | May 2019       | Expected<br>Spring 2020                       | February 2018       | April 2019         | March 2019                                    | Aug 2019                       | May 2019       | Not before 2020                                 |
| Belgium  | July 2017           |                | Expected end 2020                             | June 2017           |                    | Expected End 2020                             | Jun 2019                       |                | No award planned                                |
| Bulgaria | Expected Q2<br>2020 |                | Depends on results of the public consultation | Expected Q2<br>2020 |                    | Depends on results of the public consultation | Expected Q4<br>2020            |                |   |
| Croatia  | Expected Q3<br>2020 |                | Expected Q4<br>2020                           | Expected Q3<br>2020 |                    | Expected Q4<br>2020                           | Yet to be<br>decided           |                |   |
| Cyprus   | September<br>2019   |                | Expected Q2<br>2020                           | September<br>2019   |                    | Expected Q2<br>2020                           | September<br>2019              |                | Not<br>expected to<br>take place<br>in 2020     |
| Czechia  | July 2019           |                | Expected<br>winter<br>2019/2020               | July 2019           |                    | Expected winter 2019/2020                     |                                |                |   |
| Denmark  | March 2018          |                | March 2019                                    | Expected Q2<br>2020 |                    | Expected Q3<br>2020                           | August 2018                    |                | Expected<br>Q3 2020                             |
| Estonia  | July 2014           |                | Expected May<br>2020                          | April 2018          |                    | Suspended in<br>April 2019                    | Expected<br>November<br>2019   |                | Expected end of 2020                            |
| Finland  |                     |                | November<br>2016                              | May 2018            | April 2019         | October<br>2018                               | Expected first<br>half of 2020 |                | Expected<br>first half of<br>2020               |
| France   |                     |                | November<br>2015                              | July 2019           | Septembe<br>r 2019 | on- going<br>:early 2020                      | Jun 2018                       |                | On-going process to encourage trials in various |

| Country     | 700 MHz  |                     |  | 3.4-3-8 GHz  |                     |   | 24.25-27.5 GHz   |                     |  |
|-------------|--|---------------------|--|--|---------------------|---|--|---------------------|--|
| <del></del> | Public   | Peer                | Award  | Public   | Peer                | Award   | Public   | Peer                | Award  |
|             | consultation   | review              |  | consultation   | review              |   | consultation   | review              |  |
|             |  |                     |  |  |                     |   | - I  |                     |  |
|             |  |                     |  |  |                     |   |  |                     | sectors  |
| Germany     |  |                     | June 2015  |  |                     | June 2019   | Expected 2020  |                     |  |
| Greece      | Expected<br>Q1 2020  | Expected<br>Q3 2020 | Expected<br>Q4 2020                                      | Expected<br>Q1 2020  | Expected<br>Q3 2020 | Expected<br>Q4 2020   | Expected<br>Q1 2020  | Expected<br>Q3 2020 | Expected<br>Q4 2020  |
| Hungary     | July 2019  | December<br>2018    | Started on 18<br>July 2019                               | July 2019  | Decembe<br>r 2018   | Started on<br>18 July 2019  | July 2017  |                     |  |
| Ireland     | 20 Dec 2019 ComReg doc: 19/124  Draft Info Memorandum – March 2020 | April /<br>May 2020 | Expected Q4<br>2020                                      | July &<br>December<br>2015   | January<br>2018     | Completed<br>May 2017   | Study Q2/2020  |                     |  |
| Italy       | March 2018   | December<br>2018    | October 2018 Spectrum usable nationally from 1 July 2022 | 3.4-3.6 GHz<br>January 2018<br>(for 5G use)<br>3.6-3.8 GHz<br>March 2018 | Decembe<br>r 2018   | 3.4-3.6 GHz<br>Extended<br>licenses for<br>5G use<br>3.6-3.8 GHz<br>October<br>2018 | March 2018   | December<br>2018    | October<br>2018  |
| Latvia      | Autumn 2019  |                     | November<br>2020   | March 2018   |                     | September<br>2018   | Expected Spring/ Summer 2021* * at present 3 operators have been granted technology neutral rights of use of total |                     | Autumn/ Winter 2021, if the result of consultatio n will not be different. |

| Country     |                     | 700 MHz        |   |                        | 3.4-3-8 GH     | Z                                       | 24.25-27.5 GHz   |                |                              |
|-------------|---------------------|----------------|---|------------------------|----------------|---|--|----------------|------------------------------|
|             | Public consultation | Peer<br>review | Award   | Public consultation    | Peer<br>review | Award                                   | Public consultation  | Peer<br>review | Award                        |
|             |                     |                |   |                        |                |   | 336 MHz bandwidth and there are not any applications from operators to use wider bandwidth at present. |                |                              |
| Lithuania   | May 2018            |                | The second half of 2020. Restricted usage because of cross-border coordination issues at least until 2022-2023. | May 2018<br>March 2019 |                | The second<br>half of<br>2020.          | Expected by<br>31 March<br>2020.   |                | Expected<br>October<br>2020. |
| Luxembourg  | May 2019            |                | Expected first<br>half of 2020  | May 2019               |                | Expected<br>first half of<br>2020       | Expected first<br>half of 2020   |                | Expected second half of 2020 |
| Malta       | Q1 2020             |                | Expected June 2021  | Q1 2020                |                | Expected before 2021                    | Q1 2020  |                | Expected<br>before 2021      |
| Netherlands | Q4 2019             |                | Expected Q2<br>2020   | March 2019             |                | Expected end of 2021/beginni ng of 2022 | Q1 2020 (PC<br>ends<br>28/02/2020)   |                |                              |
| Poland      | Preconsultatio      |                | Before 30 June  | Preconsultatio         |                | Until June                              | August 2018  |                | Expected                     |

| Country  |  | 700 MHz  |                                 |   | 3.4-3-8 GHz    |  |  | 24.25-27.5 GHz |  |  |
|----------|--|--|---------------------------------|---|----------------|--|--|----------------|--|--|
| -        | Public consultation  | Peer<br>review   | Award                           | Public consultation   | Peer<br>review | Award  | Public consultation                                    | Peer<br>review | Award  |  |
|          | n August 2018<br>and 2019<br>Expected Q1<br>2022   |  | 2022                            | n August 2018<br>Consultation<br>December<br>2019/January<br>2020                                       |                | 2020   | Expected Q1<br>2021                                    |                | before 2022<br>(subject of<br>market<br>demand)            |  |
| Portugal | April 2018 & Oct.2019 (RoU and award procedure)  Consultation on the auction rules expected for Jan.2020 |  | Expected<br>before July<br>2020 | April 2018&Oct.201 9 (RoU and award procedure)  Consultation on the auction rules expected for Jan.2020 |                | Expected before July 2020  100 MHz (3.4-3.5 GHz) can already be use in accordance with the new technical conditions (decision from Dec.2019) | April 2018   |                |  |  |
| Romania  | August 2019  |  | Expected<br>before July<br>2020 | August 2019   |                | Expected<br>before July<br>2020  | December<br>2018<br>August 2019<br>Expected Q2<br>2020 |                | Expected before 2022 (subject of market demand)            |  |
| Slovakia | December<br>2019   | Expected<br>after<br>tender for<br>700 MHz<br>band (in | Q2 2020                         | 3.4-3.6 GHz:<br>October 2014<br>3.6-3.8 GHz:<br>November  |                | 3.4-3.6 GHz:<br>May 2016<br>3.6-3.8 GHz<br>July 2017   | Not expected to take place in 2020.                    |                | Not<br>expected to<br>take place<br>in 2020<br>(subject of |  |

| Country           | 700 MHz                |                              |                                | 3.4-3-8 GHz  |   |  | 24.25-27.5 GHz                            |   |   |
|-------------------|------------------------|------------------------------|--------------------------------|--|---|--|---|---|---|
| -                 | Public consultation    | Peer<br>review               | Award                          | Public consultation  | Peer<br>review  | Award  | Public consultation                       | Peer<br>review  | Award   |
|                   |                        | 2021).                       |                                | 2013   |   |  |   |   | negotiation<br>with<br>military).   |
| Slovenia          | Expected December 2019 | December<br>2018<br>Q1/2020  | Expected June/October 2020     | Expected<br>December<br>2019   | Q1/2020   | Expected June/Octobe r 2020  | Expected<br>December<br>2019              | Q1/2020   | Expected June/Octob er 2020   |
| Spain             | 2017 and 2019          |                              | Early 2020                     | 2017   |   | July 2018  | 2017 and 2019                             |   |   |
| Sweden            | July 2018              | May 2018<br>February<br>2019 | December<br>2018               | July 2019  | April 2019  | Expected<br>2020   | December<br>2019                          |   | Expected<br>2020  |
| United<br>Kingdom | December<br>2018       | February<br>2019<br>May 2019 | Expected<br>before May<br>2020 | 3.4-3.6 GHz:<br>November<br>2016<br>3.6-3.8 GHz:<br>December<br>2018<br>Defrag: June<br>2019 | 3.4-3.6<br>GHz: June<br>2018<br>3.6-3.8<br>GHz:<br>February<br>2019<br>May 2019 | 3.4-3.6 GHz: April 2018  3600-3680 MHz – already assigned  3680 MHz - 3800 MHz: Expected before May 2020 | July 2017<br>24.25-26.5<br>GHz: July 2019 | NB Peer<br>Review not<br>applicable<br>as<br>spectrum<br>being<br>made<br>available<br>through<br>non-<br>competitiv<br>e process | 24.25-26.5<br>GHz: Made<br>local<br>licences<br>available on<br>demand<br>subject to<br>co-<br>ordination |
| Norway            | 2018                   |                              | June 2019                      | August 2019  |   | 3.6-3.8 GHz<br>already<br>assigned for<br>5G<br>The whole<br>band<br>expected to<br>be assigned          | August 2019                               |   | Test licences awarded in 2019.  No clear market demand, award is  |

| Country | 700 MHz      |        |       | 3.4-3-8 GHz  |        |         | 24.25-27.5 GHz |        |             |
|---------|--------------|--------|-------|--------------|--------|---------|----------------|--------|-------------|
|         | Public       | Peer   | Award | Public       | Peer   | Award   | Public         | Peer   | Award       |
|         | consultation | review |       | consultation | review |         | consultation   | review |             |
|         |              |        |       |              |        |         |                |        |             |
|         |              |        |       |              |        | in 2021 |                |        | not         |
|         |              |        |       |              |        |         |                |        | expected to |
|         |              |        |       |              |        |         |                |        | take place  |
|         |              |        |       |              |        |         |                |        | in 2020     |

Spectrum already assigned and fully usable

Spectrum already assigned but not (partially or fully) usable