



NON-BINDING TRANSLATION

**PUBLIC TENDER WITH PUBLIC AUCTION
FOR THE AWARD OF RADIO FREQUENCIES
FOR PROVISION OF PUBLIC
COMMUNICATIONS SERVICES IN RADIO
FREQUENCY BANDS 700 MHz, 1500 MHz,
2100 MHz, 2300 MHz, 3600 MHz in 26 GHz**

DRAFT INFORMATION MEMORANDUM

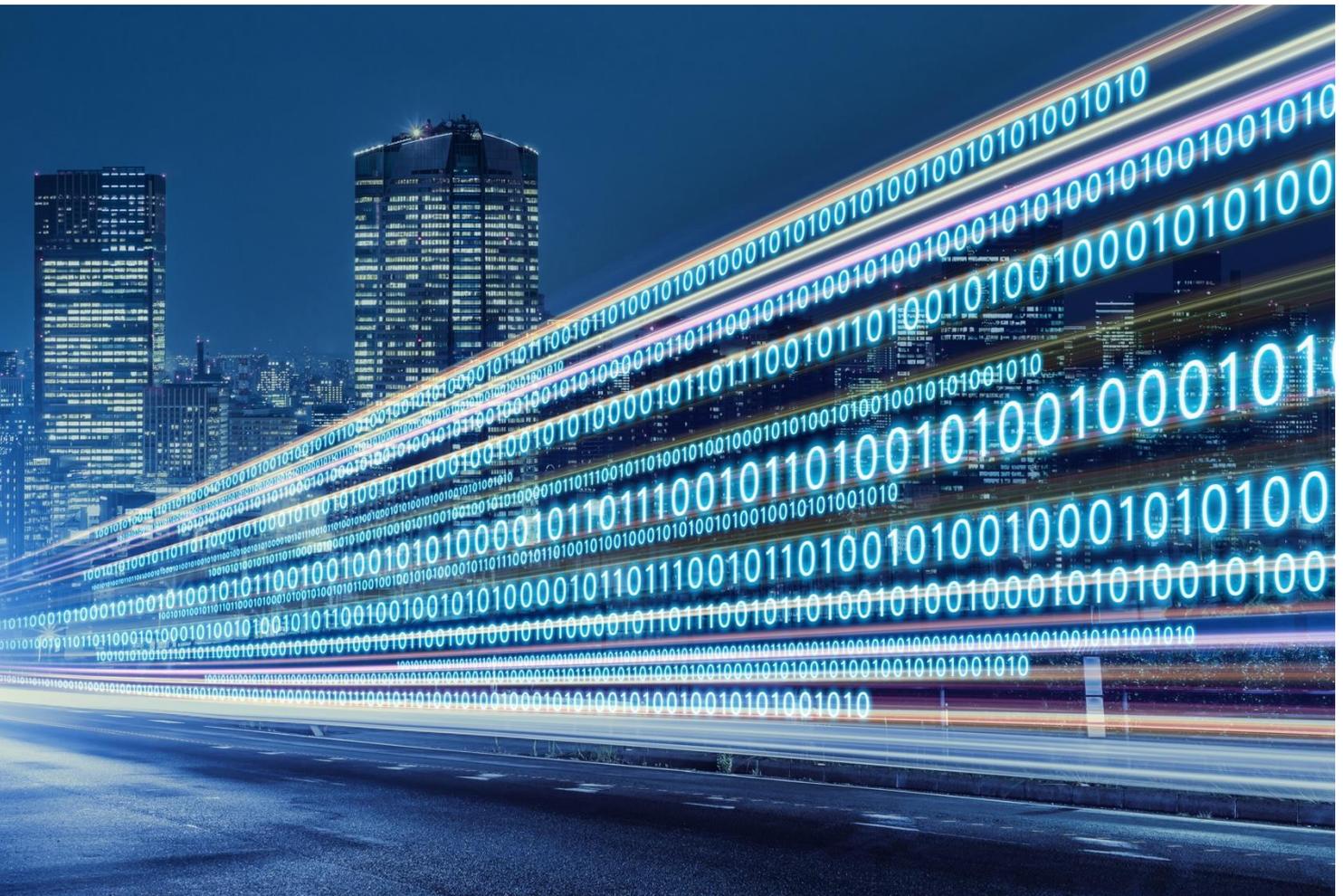




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A Introduction

Due to users' increasing demand for data transfer and subsequently greater bandwidth, the network utilization in the current frequency bands is already high for the majority of Slovenian operators. Furthermore, due to the general trend of verticals transitioning to modern technologies and services that require advanced communication services (gigabit data rates, latency that supports real-time data transfer, unlimited or several 100 GB of monthly data transfer, and mass M2M communication) over networks for providing public communication services to end users, a large amount of additional spectrum in different radio-frequency bands will be required. Based on current global and national market trends, the growth in the coming years growth is going to be exponential.

The Agency for Communication Networks and Services of the Republic of Slovenia (hereinafter referred to as the Agency) expects to fulfil these requirements to the greatest extent possible with the amount of spectrum that shall be available in this public tender. Offering all the currently available spectrum (i.e. radio frequencies in 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz and 26 GHz bands) will allow the operators to secure adequate frequency ranges for the next 15 years.

The Agency will award the bands technologically neutrally. The offered frequencies comprise 700 MHz FDD, 3600 MHz and 26 GHz bands, which the European Commission identified as pioneer bands for the initial launch of 5G technology, as well as the 1500 MHz SDL band, for which EU documents prescribe mandatory time limits, and other available radio-frequency bands (700 MHz SDL and 2300 MHz), which the Agency shall include in the tender, because they are complementary to certain aforementioned band. In addition, licences for the frequencies in the 2100 MHz band expire in September 2021 (except for one block, the licence for which will expire in April 2023), so they must be awarded on time to ensure a stable and predictable environment for the operators that need these frequencies.

5G for Europe: An Action Plan¹ identifies three priority radio-frequency bands designated for the roll-out of the 5G technology, namely the 700 MHz FDD, 3600 MHz and 26 GHz bands. The time limits for assigning these frequencies and allowing their use, and the applicable conditions are set in Commission and Council implementing decisions, namely 30 June 2020 for the 700 MHz FDD band, and 31 December 2020 for 3600 MHz and 26 GHz bands.

Bands below 1 GHz, which include the 700 MHz band, have a long range and support economically viable territorial and population coverage; however, they do not support high data rates and transfer of high data volumes. Frequencies in the 700 MHz SDL and 1500 MHz SDL are designated for increasing the capacities in bands below 1 GHz.

Medium frequency bands (1–8 GHz) include the available frequencies in 2100 MHz, 2300 MHz and 3600 MHz bands. The 3600 MHz pioneer band supports high-capacity high data rates through large contiguous blocks; it can be complemented and to an extent even substituted with the 2300 MHz band, while the 2100 MHz band, which provides additional capacities with relatively limited bandwidth, shall be available because the current decisions on awarding radio frequencies shall expire (hereinafter referred to as DARF).

The 26 GHz radio-frequency band (the so-called mm-band) is intended for Gbps data rates and extreme data transfers (up to 10 Tbps/km² together with other mm-bands that were designated for public mobile

¹COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGION 5G for Europe: An Action Plan, COM/2016/0588 final, (<https://eur-lex.europa.eu/legal-content/sl/TXT/?uri=CELEX%3A52016DC0588>)



technologies at the WRC 19) and subsequently for setting up hot spots i.e. small-area access points covering local areas where such services are required (e.g. airports, stations, stadiums or hospitals).

This information memorandum describes the planned procedure of the public tender for awarding radio frequencies for the provision of public communication services in the 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz and 26 GHz frequency bands. The document details the subject of the tender, its conditions and requirements, the tender process, and format and rules of the auction. It also specifies the conditions for awarding the relevant radio frequencies, spectrum caps, and special conditions and obligations related to their use after the assignment (i.e. general coverage obligations, additional obligations linked to the 700 MHz, coverage obligations based on the 5G Action Plan).

The general provisions and objectives of the planned tender procedure are determined in Section A.1 of the document (Spectrum management policy and public tender objectives).

A total of 1745 MHz of frequency spectrum shall be made available in the planned tender, 570 MHz of which is paired spectrum, and 1175 MHz is unpaired spectrum, to be used for terrestrial systems for providing electronic communication services. Information about the spectrum to be offered in the planned tender is given in Section A.4 of this document (Description of the subject of the tender), Section H (Technical requirements for providing services) sets the conditions and restrictions for spectrum use, while Section G (Monitoring the fulfilment of coverage obligations) defines the planned procedures for checking and monitoring the compliance with DARF obligations.

All information regarding the procedure and requirements of the planned tender is provided in Section A.2 (Participating in the tender). This section contains general provisions of the planned tender procedure, rules for participating, and requirements for preparing a public tender application. It also describes the procedure for reviewing documents attached to bids, which shall conclude by issuing the decision on selecting bidders, and provides the general public auction rules and the procedure for issuing DARF. The procedure and rules of the auction are presented in more detail in Section F (Auction rules for Electronic Auction). The document also contains forms and templates for appendices in Section I (Forms) and J (Annexes).

The document, which is in the process of public consultation, is not yet final. The Agency shall review and reasonably accommodate the received opinions and comments from stakeholders, and draw up the final version of documentation for this public tender with auction, which will then be published on the Agency's website.

A.1 Spectrum management policy and public tender objectives

The Agency determined three pillars of the radio-frequency spectrum management policy for this public tender:

- ensure a technically effective assignment of the radio-frequency spectrum;
- preserve and promote effective competition between terrestrial system operators that can provide wireless broadband electronic communication services;
- award the radio-frequency spectrum at market prices.

Based on these three pillars and in accordance with the 5G Action Plan guidelines, this public tender shall also pursue the following objectives, compliant with Articles 195–197 of the Electronic Communications Act



(Official Gazette of the Republic of Slovenia no. 09/12, 110/13, 40/14 – ZIN-B, 54/14 – Constitutional Court Decision, 81/15, 40/17, 30/19; hereinafter referred to as ZEKom-1) and the Digital Agenda for Europe²:

- enable the roll-out of advanced technologies by assigning sufficient amounts of spectrum in sufficiently large blocks on time;
- provide a stable environment for operators and other investors;
- ensure digital inclusion of the population on as wide territory as possible;
- promote investments and development, and enabling the use of the radio frequency spectrum primarily for services that contribute to achieving the highest possible level of social and economic progress;
- keep pace with the most developed countries in the world in introducing Industry 4.0 and intelligent connectivity with the purpose of improving the social and economic well-being of the citizens of the Republic of Slovenia (specialized new jobs in different industries in the 2025–2030 period);
- create the conditions for building radio systems for users in the Connected Autonomous Driving (CAD) field and other verticals.

A.2 Participating in the tender

All natural persons and legal entities which are financially, organizationally, and technically capable of planning, deploying, and operating public mobile communication networks and providing public communications services may participate the planned invitation to public tender as applicants by submitting their applications.

Applicants in the planned invitation to public tender shall be treated in accordance with Chapter A.6 (Conditions and requirements of the public tender) and C.2.4 (Information on applicant's ownership (no Form)).

The application must be valid at least until dd.mm.yyyy. Each applicant may submit only one application.

In accordance with provisions from paragraph 2 of Article 41 of ZEKom-1, the public tender is anonymous, so instead of the data on applicants' names, their codes shall be used in the public opening of applications. The Agency shall allocate codes to applications upon their submission.

For the duration of the public tender with a public auction, all the subjects who submit an application for the public tender shall be deemed applicants. In the scope of these applicants may, in accordance with conditions and requirements of the public tender, receive the status of a bidder during the public tender.

A.2.1 Data and procedure confidentiality

The information that the applicant will rightly designate as confidential will only be used for the purpose of the invitation to tender and will not be accessible to anyone outside the authorized persons of the Agency who is responsible for the implementation of the subject invitation to tender (tender management committee). Documents containing personal data may be classified as confidential by the provider, if they

²Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, A Digital Agenda for Europe, COM (2010) 245 final/2; replacing the document COM (2010) 245 final of 19 May 2010; Brussels, 26 August 2010

are not contained in any public register or otherwise publicly available and other business data in accordance with Trade Secret Law (Official Gazette RS, No. 22/2019).

The applicant may not label as confidential the data that affect the selection. If data affecting the selection are labelled as confidential, the Agency shall not treat them as confidential.

The Agency will treat all personal data in the tender dossier in accordance with the Personal Data Protection Act (Official Gazette RS, No. 94/07) and the General Data Protection Regulation (Regulation (EU) 2016/679)³.

The Agency shall treat as trade secrets only those files in the tender documentation that shall have the text "TRADE SECRET" written in capital letters in the top right corner, with the signature of the person signing the application underneath this text. If only a certain piece of data in the document is deemed confidential, this confidential part must be clearly marked, with the text "TRADE SECRET" written in the line along the right edge.

Notwithstanding the above, the Agency shall in accordance with the Paragraph 4 of Article 39 of ZEKom-1 protect the list of applicants and the submitted applications as a trade secret until the deadline for submitting applications expires.

The Agency is not responsible for the confidentiality of the data not marked as described above.

A.3 Selecting the winning bid

The selection of winning bids only relies on selecting bids that provide the highest total bid amounts subject to the availability of lots, therefore, the Agency shall, following a successful public tender and in accordance with the Paragraph 1 of Article 44 of ZEKom-1, conduct a public auction in compliance with the auction rules F (Auction rules for Electronic Auction).. Bids will be evaluated in accordance with the rules described in this document F.2 (Auction rules). The bidders will be allocated frequency blocks with specified frequency bandwidth in the 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz and 26 GHz bands for providing public mobile services.

The public auction shall only be conducted if at least two applicants qualify.

The chairperson of the commission from paragraph 2 of Article 37 of ZEKom-1 or their deputy acts as auctioneer in the public auction (paragraph 1 of Article 45 of ZEKom-1).

The Agency shall issue DARFs to successful bidders.

Successful bidders shall have to pay the fee for the efficient use of a limited natural resource in accordance with the section F.1 (Reserve price and payment method) and annual compensation for the efficient use of scarce natural resources in accordance with applicable regulations.

A.4 Description of the subject of the tender

As part of the call for public tender with public auction, the Agency will offer fully available 700 MHz FDD, 700 MHz SDL, 1500 MHz SDL, 2100 MHz FDD bands and a portion of the 2300 MHz TDD, 3600 MHz TDD and 26 GHz TDD bands. All frequency bands will be designed for terrestrial systems capable of providing wireless

³ Uredba (EU) 2016/679 Evropskega parlamenta in Sveta z dne 27. aprila 2016 o varstvu posameznikov pri obdelavi osebnih podatkov in o prostem pretoku takih podatkov ter o razveljavitvi Direktive 95/46/ES (Splošna uredba o varstvu podatkov) (OJ L 119, 4.5.2016, p. 1–88)

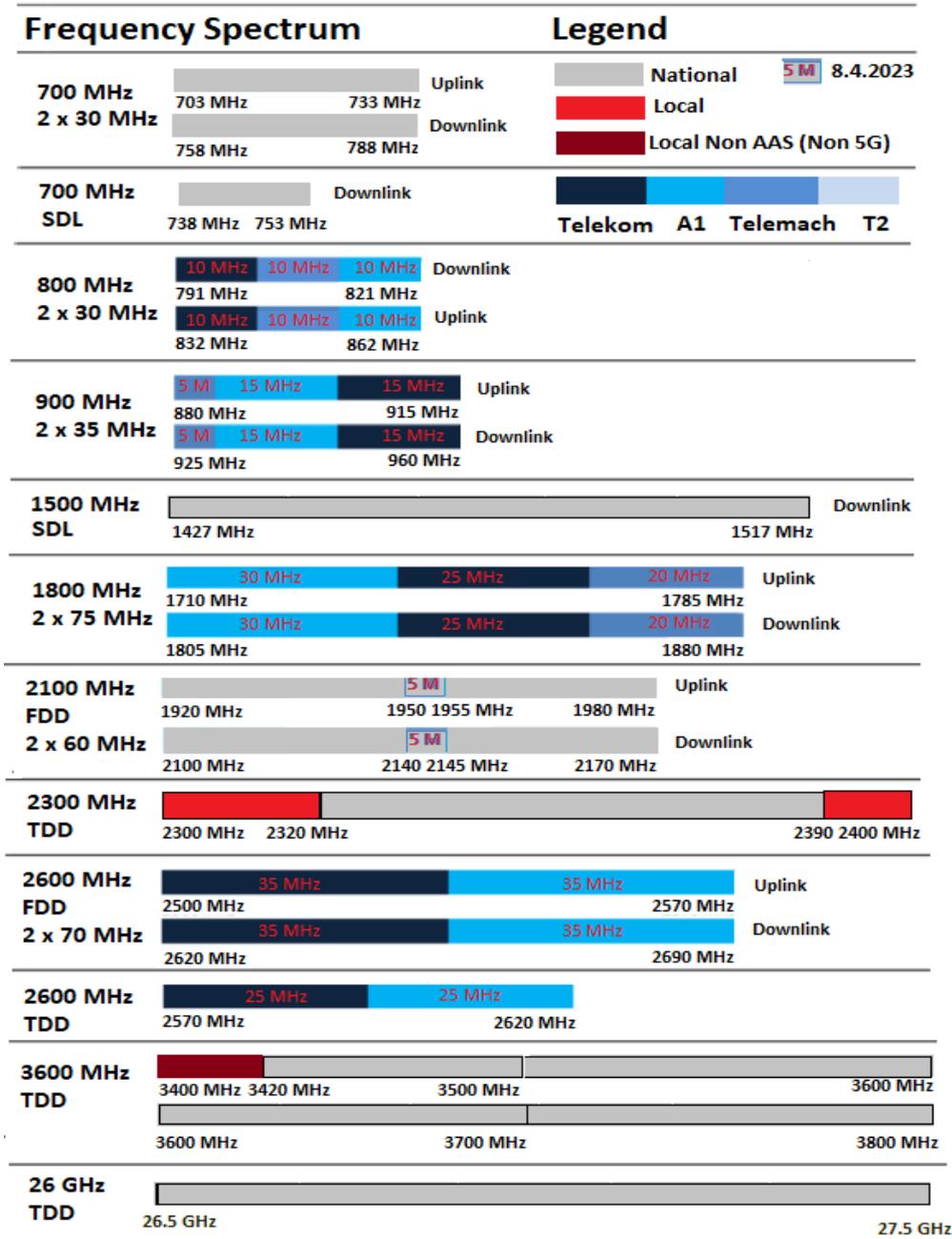
broadband electronic communications services and will be technologically neutral. As will be discussed in more detail in the next section, the following frequency spectrum will be the subject of an upcoming call for public tender:

- 703 – 733/758 – 788 MHz paired FDD band (hereinafter referred to as: *700 MHz FDD frequency band*),
- 738 – 753 MHz unpaired Supplementary Downlink SDL (hereinafter referred to as: *700 MHz SDL frequency band*),
- 1427 – 1517 MHz unpaired Supplementary Downlink SDL (hereinafter referred to as: *1500 MHz SDL frequency band*), which consists of the Lower Extension band (i. e. 1427-1452 MHz), the Core band (i.e. 1452 – 1492 MHz) and the Upper Extension band (i.e. 1492-1517 MHz),
- 1920 – 1980/2110 – 2170 MHz paired FDD band (hereinafter referred to as: *2100 MHz FDD frequency band*),
- 2320 – 2390 MHz unpaired TDD band (hereinafter referred to as: *2300 MHz TDD frequency band*),
- 3420 – 3800 MHz unpaired TDD band (hereinafter referred to as: *3600 MHz TDD frequency band*),
- 26.5 – 27.5 GHz unpaired TDD band (hereinafter referred to as: *26 GHz TDD frequency band*).

The available spectrum of individual frequency bands subject to this invitation to tender is subdivided into blocks, which for auctioning purposes will be categorized into lots into different categories, with lots within the same category having comparable technical and usable characteristics. Specific technical conditions and restrictions on the use of each frequency spectrum are discussed in sections A.6 (Conditions and requirements of the public tender) and H: (Technical requirements for providing services), where besides that as well the conditions for the use of Unmanned Aircraft Systems and sharing/coexistence with other services is specified.



Figure A-1: frequency spectrum subject to this invitation to tender (grey).



Source: AKOS

The frequency spectrum subject to this invitation to tender is shown in Figure A-1.

Table A-1: Frequencies available in the tender procedure

Frequency band	Lower band (FDD) from ... to ... [MHz]	Upper band (FDD) from ... to ... [MHz]	Simplex band (TDD) from ... to ... [MHz]	Bandwidth to be awarded [MHz]	Available for use
700 MHz FDD⁴	703 – 733	758 – 788		2 x 30	15 years
700 MHz SDL⁵			738 – 753	1 x 15	15 years
1500 MHz SDL – Lower Extension band		1427 – 1452		1 x 25	15 years
1500 MHz SDL – Core band		1452 – 1492		1 x 40	15 years
1500 MHz SDL – Upper Extension band		1492 – 1517		1 x 25	15 let
2100 MHz FDD⁶	1920 – 1980	2110 – 2170		2 x 55	from 22. 9. 2021 till 22. 9. 2036
2300 MHz TDD	1950 – 1955	2140 – 2145		2 x 5	from 9. 4. 2023 till 22. 9. 2036
3600 MHz⁷ TDD			2320 – 2390	1 x 70	from 1. 1. 2022 till 1. 1. 2037
26 GHz TDD			3420 – 3800	1 x 380	15 years
700 MHz FDD⁸			26500 – 27500	1 x 1000	15 years

Source: AKOS

A.4.1 700 MHz frequency band

The subject of the upcoming call for public tender will be the 700 MHz band, which includes 2 x 30 MHz of paired frequency bands between 703 MHz and 788 MHz and 15 MHz of SDL.

A more detailed situation in the 700 MHz band is described in Figure A-2: A more detailed presentation of situations in the 700 MHz band. The frequency spectrum subject to this invitation to tender is shown in Figure A-1.

⁴ Plan of transition of DVB-T to other bands and releasing the 700 MHz in the neighbouring countries - H.1.4 (Restrictions on demand due to digital TV usage in neighbouring countries)

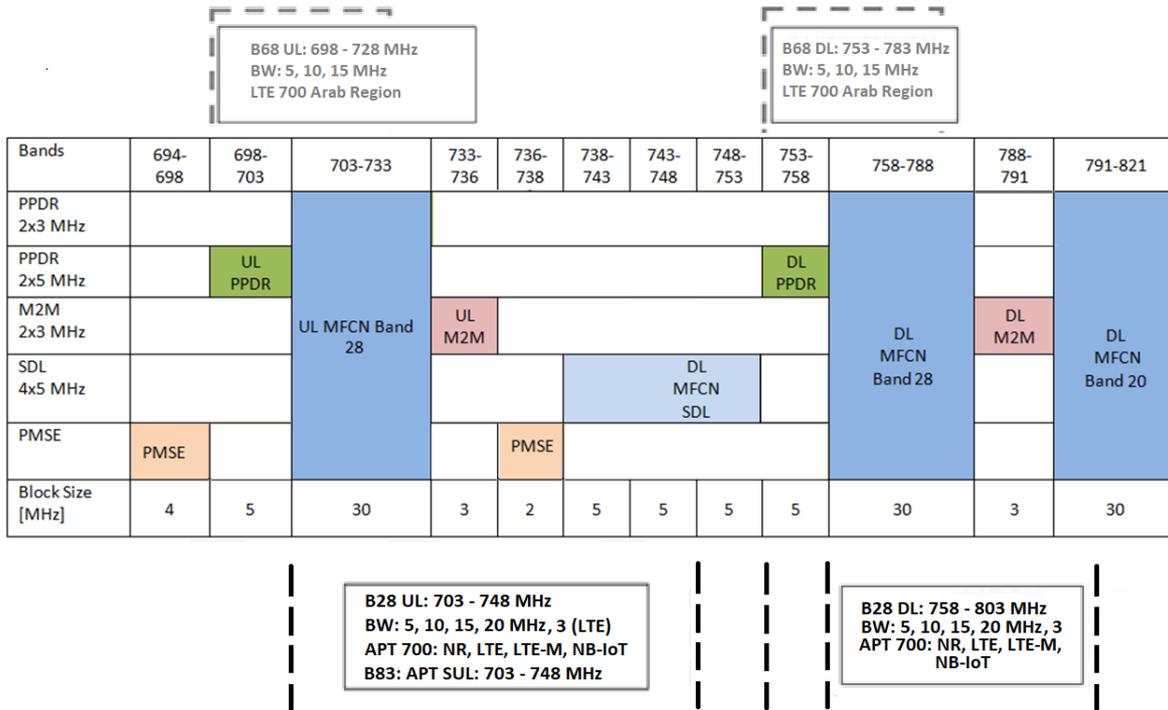
⁵ Plan of transition of DVB-T to other bands and releasing the 700 MHz in the neighbouring countries - H.1.4 (Restrictions on demand due to digital TV usage in neighbouring countries)

⁶ 2x5 MHz block (1950 – 1955/ 2140 – 2145) od 9. 4. 2023 do 22. 9. 2036

⁷ Sub-band 3400 – 3410 MHz from 22. 9. 2012, sub-bands 3410 – 3430 and 3500 – 3530 MHz are partially used Figure H-17: Overview of spectrum 3400 – 3800 MHz occupancy with existing rights

⁸ Sub-band 3400 – 3410 MHz from 22. 9. 2012, sub-bands 3410 – 3430 and 3500 – 3530 MHz are partially used - Figure H-17: Overview of spectrum 3400 – 3800 MHz occupancy with existing rights).

Figure A-2: A more detailed presentation of situations in the 700 MHz band



Source: 3GPP TS36.101

A.4.1.1 700 MHz FDD frequency band

The frequency band includes a total of 2 x 30 MHz of paired frequency bands between 703 MHz and 788 MHz (downlink: 703 – 733 MHz, uplink: 758 – 788MHz). Six The 2 x 5 MHz blocks (from BA01 to BA06) shall be available in the public tender for terrestrial systems in the territory of the Republic of Slovenia capable of providing wireless broadband electronic communications services in accordance with the European Parliament and of the Council decision (EU) 2017/899⁹ and Commission implementing decision 2016/ and other documents as specified in chapter H for 15 years.

Overview of the 700 MHz FDD frequency band is presented in the Figure below:

Figure A-3: Frequency band 700 MHz FDD



 Available assignment for 15 years

A detailed list of radio frequencies is provided in the table below:

⁹ Sklepom 2017/899 Evropskega parlamenta in sveta z dne 17. maja 2017 o uporabi frekvenčnega pasu 470 – 790 MHz v Uniji (<https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32017D0899>)

Table A-2: Blocks available in the 700 MHz FDD band

Block name	Frequencies	Bandwidth
BA01	703 – 708 paired with 758 – 763 MHz	2 x 5 MHz
BA02	708 – 713 paired with 763 – 768 MHz	2 x 5 MHz
BA03	713 – 718 paired with 768 – 773 MHz	2 x 5 MHz
BA04	718 – 723 paired with 773 – 778 MHz	2 x 5 MHz
BA05	723 – 728 paired with 778 – 783 MHz	2 x 5 MHz
BA06	728 – 733 paired with 783 – 788 MHz	2 x 5 MHz

For the purposes of bidding in the public auction, this frequency spectrum given in one category of lots.

Detailed list of lots by category is provided in the table below:

Table A-3: Lots by category in the 700 MHz FDD band

Category	No. of lots	Included lots	Spectrum amount per lot	Frequency range
A	6	A_01 to A_06	2 x 5 MHz	Generic frequency lots in the range 703 – 733/758 – 788 MHz (FDD)

A.4.1.2 700 MHz SDL Frequency band

The band includes a total of 15 MHz of unpaired frequency bands between 738 MHz and 753 MHz for Supplementary Downlink – SDL.

One 15 MHz block (BB01) shall be available in the public tender for terrestrial systems in the territory of the Republic of Slovenia capable of providing wireless broadband electronic communications services in accordance with the European Parliament and of the Council decision (EU) 2017/899¹⁰ and Commission implementing decision 2016/ and other documents as specified in chapter H for 15 years.

In order to ensure compatibility between M2M and MFCN SDL, the BS equipment in sub-band 738 – 743 MHz has to implement the SDL E.I.R.P. limits or other mitigation techniques in order to protect the band 733 – 736 MHz in accordance with chapter H.1.3 (Base Station SDL E.I.R.P. limits).

¹⁰ Sklepom 2017/899 Evropskega parlamenta in sveta z dne 17. maja 2017 o uporabi frekvenčnega pasu 470 – 790 MHz v Uniji (<https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32017D0899>)

Overview of the unpaired 700 MHz frequency band (SDL) is presented in the Figure below: Figure A-4: Frequency band 700 MHz SDL

BB01¹²

Available assignment for 15 years

A detailed list of radio frequencies is provided in the table below:

Table A-4: Block available in the 700 MHz SDL frequency band

Block name	Frequencies	Bandwidth
BB01 ¹³	738 – 753 MHz	1 x 15 MHz

For the purposes of bidding in the public auction, this frequency spectrum will be given in one category of lots.

Table A-5: Lot / category in the 700 MHz SDL frequency band

Category	No. of lots	Included lots	Spectrum amount per lot	Frequency range
B	1	B_01	1 x 15 MHz	Specific frequency lot in the range 738 – 753MHz (FDD SDL)

A.4.2 1500 MHz SDL frequency band

The band includes a total of 90 MHz of unpaired frequency bands between 1427 MHz and 1517 MHz for Supplementary Downlink – SDL. 10 MHz blocks in the Core band (i.e. 1452-1492 MHz) and the Extension bands (1427-1452 MHz and 1492 - 1517 MHz) shall be available in the public tender for terrestrial systems in the territory of the Republic of Slovenia capable of providing wireless broadband electronic communications services in the in accordance with the Commission implementing decision (EU) 2018/661¹⁴ and Implementing Decision (EU) 2015/750¹⁵ and other documents as specified in chapter H for 15 years.. For MSS protection provisions of H.2.3 (Measures for providing compatibility with MSS apply.

¹¹ Za zagotovitev kompatibilnosti med M2M in MFCN SDL, morajo bazne postaje BS v podpasu 738-743 MHz upoštevati omejitve moči (SDL e.i.r.p.) ali uporabiti ostale tehnike za preprečitev motenj.

¹² To ensure compatibility between M2M and MFCN SDL, BS base stations in the 738-743 MHz sub band must comply with power limits (SDL e.i.r.p.) or use other interference prevention techniques. If the block is used as an additional up-link SUL, it may not be broadcast in the 748-753 MHz sub band, but there is no limit for the 738-743 MHz sub band.

¹³ In order to ensure compatibility between M2M and MFCN SDL, the BS equipment in sub-band 738-743 MHz has to implement the SDL e.i.r.p. limits or other mitigation techniques. If the block is used as SUL, the upper 5 MHz 748 – 753 MHz shall be used as a guard band to protect the PPDR systems in the frequency band 753 – 758 MHz

¹⁴ Sklep Evropske komisije 2018/661 z dne 26. aprila 2018 o spremembi Izvedbenega sklepa (EU) 2015/750 o harmonizaciji frekvenčnega pasu 1452 MHz – 1492 MHz za prizemne sisteme, ki lahko v Uniji zagotavljajo elektronske komunikacijske storitve, v zvezi z njegovo razširitvijo na harmonizirana frekvenčna pasova 1427 MHz – 1452 MHz in 1492 MHz – 1517 MHz (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018D0661>)

¹⁵ Izvedbeni sklep Komisije (EU) 2015/750 z dne 8. maj 2015 o harmonizaciji frekvenčnega pasu 1 452 MHz–1 492 MHz za prizemne sisteme, ki lahko v Uniji zagotavljajo elektronske komunikacijske storitve (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015D0750>)

Overview of the 1500 MHz SDL frequency band is presented in the Figure below:

Figure A-5: Frequency band 1500 MHz

*	BC21	BC22	BC11	BC12	BC13	BC14	BC23	BC24	**
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Available assignment for 15 years

*Lower 5 MHz with constrains due to protection of the Radioastronomy

**Upper 5 MHz with constrains due to protection of the MSS

Table A-6: Blocks available in the 1500 MHz SDL band

Block name	Frequencies	Bandwidth
Lower Extension band		
BC21	1427 – 1442 MHz	1 x 15 MHz*
BC22	1442 – 1452 MHz	1 x 10 MHz
Core band		
BC11	1452 – 1462 MHz	1 x 10 MHz
BC12	1462 – 1472 MHz	1 x 10 MHz
BC13	1472 – 1482 MHz	1 x 10 MHz
BC14	1482 – 1492 MHz	1 x 10 MHz
Upper Extension band		
BC23	1492 – 1502MHz	1 x 10 MHz
BC24	1502 – 1517 MHz	1 x 15 MHz**

Detailed list of lots by category is provided in the table below:

Table A-7: Lots available in the 1500 MHz SDL band

Category	No. of lots	Included lots	Spectrum amount per lot	Frequency range
C1	4	C_11 to C_14	1 x 10 MHz	Generic frequency lots in the range 1452 – 1492 MHz (FDD SDL)
C2	4	C_21 to C_24	1 x 10 MHz	Generic frequency lots in the range 1432 – 1452 MHz and 1492 - 1512 MHz (FDD SDL) – 1 x 5 MHz of spectrum is added to the lower and upper 5 MHz lot, the lower block has constrains due to protection of RAS, the upper due to protection of MSS in 1518 – 1530 MHz

A.4.3 Frequency blocks in the 2100 MHz radio frequency band

The band includes a total of 2 x 60 MHz of paired frequency bands between 1920 MHz and 2170 MHz (downlink: 1920 – 1980 MHz, uplink: 2110 – 2170 MHz). Existing radio frequency allocation decisions in 11 blocks expire on 21. September 2021, and one of the existing radio frequency allocation decision expires 8. April 2023. In order to harmonize the expiry of the already allocated radio frequency allocation decisions, the

validity of the radio frequency allocation decisions under this invitation to tender will expire 15 years after 22. September 2021.

Twelve 2 x 5 MHz blocks from BD01 to BD12 shall be available in the public tender for terrestrial systems in the territory of the Republic of Slovenia capable of providing wireless broadband electronic communications services in accordance with the Commission implementing decision EU(2020)667¹⁶ and Commission implementing decision (EU) 2012/688/EU¹⁷ and other documents as specified in chapter H for 15 years from 22. 9. 2021.

Overview of the 2100 MHz frequency band is shown in the figure below:

Figure A-6: Frequency band 2100 MHz



A detailed list of radio frequencies is provided in the table below:

Table A-8: Blocks available in the 2100 MHz band

Block name	Frequencies	Bandwidth
BD01	1920 – 1925 paired with 2110 – 2115 MHz	2 x 5 MHz
BD02	1925 – 1930 paired with 2115 – 2120 MHz	2 x 5 MHz
BD03	1930 – 1935 paired with 2120 – 2125 MHz	2 x 5 MHz
BD04	1935 – 1940 paired with 2125 – 2130 MHz	2 x 5 MHz
BD05	1940 – 1945 paired with 2130 – 2135 MHz	2 x 5 MHz
BD06	1945 – 1950 paired with 2135 – 2140 MHz	2 x 5 MHz
BD07	1950 – 1955 paired with 2140 – 2145 MHz	2 x 5 MHz
BD08	1955 – 1960 paired with 2145 – 2150 MHz	2 x 5 MHz
BD09	1960 – 1965 paired with 2150 – 2155 MHz	2 x 5 MHz
BD10	1965 – 1970 paired with 2155 – 2160 MHz	2 x 5 MHz
BD11	1970 – 1975 paired with 2160 – 2165 MHz	2 x 5 MHz
BD12	1975 – 1980 paired with 2165 – 2170 MHz	2 x 5 MHz

¹⁶ Izvedbeni sklep EU(2020)667 z dne 6. maja 2020 o spremembi Sklepa 2012/688/EU glede posodobitve ustreznih tehničnih pogojev (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020D0667>)

¹⁷ Sklep Komisije št. 2012/688/EU z dne 5. novembra 2012 za frekvenčna pasova 1 920–1 980 MHz in 2 110–2 170 za prizemne sisteme, ki lahko zagotavljajo elektronske komunikacijske storitve v Uniji (<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32012D0688>)

Detailed list of lots by category is provided in the table below:

Table A-9: Lots by category in the 2100 MHz band

Category	No. of lots	Included lots	Spectrum amount per lot	Frequency range
D	11	D_01 to D_12	2 x 5 MHz	Generic frequency lots in the range 1920 – 1980/2110 – 2170 MHz (FDD)

A.4.4 2300 MHz TDD frequency band

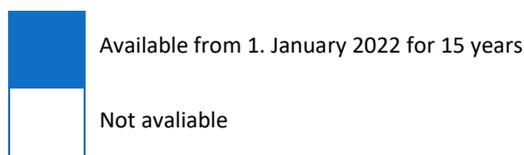
The band 2300 MHz includes a total of 70 MHz of unpaired frequency bands between 2320 MHz and 2390 MHz. Seven 10 MHz blocks from BE01 to BE07 shall be available in the public tender for terrestrial systems in the territory of the Republic of Slovenia capable of providing wireless broadband electronic communications services in accordance with ECC Decision (14)02, and other documents as specified in chapter H for 15 years from 1. 1. 2022.

Until the end of 2025 is required synchronization following the default synchronization scheme – Frame B (»DD DS UU DD DD«) from ECC Recommendation (20)03 where LTE and new radio – NR have a harmonized frame start, with frame duration of 5 ms. After 2025, when the full 5G NR implementation is expected, the holders of radio frequency allocation decisions in this band may propose another harmonized scheme. Agency will define a new harmonised default synchronization scheme and decisions allocating radio frequencies shall be amended ex officio for this frequency band.

Default common reference phase clock is the GNSS technique as defined in the executive summary of ECC Report 216¹⁸ and ECC Report 296¹⁹.

Overview of the 2300 MHz frequency band is presented in the Figure below:

Figure A-7: Frequency band 2300 MHz



A detailed list of radio frequencies is provided in the table below:

¹⁸ ECC Report 296: National synchronisation regulatory framework options in 3400-3800 MHz: a toolbox for coexistence of MFCNs in synchronised, unsynchronised and semi-synchronised operation in 3400-3800 MHz (<https://www.ecodocdb.dk/download/19d5a467-c234/ECC%20Report%20296.pdf>)

¹⁹ ECC Report 216: Practical guidance for TDD networks synchronisation (<https://www.ecodocdb.dk/download/220ac21f-b44b/ECCREP216.PDF>)

Table A-10: Blocks available in the 2300 MHz band

Block name	Frequencies	Bandwidth
BE01	2320 – 2330 MHz	1 x 10 MHz
BE02	2330 – 2340 MHz	1 x 10 MHz
BE03	2340 – 2350 MHz	1 x 10 MHz
BE04	2350 – 2360 MHz	1 x 10 MHz
BE05	2360 – 2370 MHz	1 x 10 MHz
BE06	2370 – 2380 MHz	1 x 10 MHz
BE07	2380 – 2390 MHz	1 x 10 MHz

For the purposes of bidding in the public auction, this frequency spectrum will be given in one category of lots.

Detailed list of lots by category is provided in the table below:

Table A-11: Lots by category in the 2300 MHz band

Category	No. of lots	Included lots	Spectrum amount per lot	Frequency range
E	7	E_01	7 x 10 MHz	Specific frequency lot in the range 2320 – 2390 MHz (TDD)

A.4.5 3600 MHz TDD frequency band

The band includes a total of 380 MHz of unpaired frequency spectrum between 3420 MHz and 3800 MHz. thirtyeight 10 MHz TDD blocks (from BF012 to BF38) shall be available in the public tender for terrestrial systems in the territory of the Republic of Slovenia capable of providing wireless broadband electronic communications services in accordance with the Commission implementing decisions (EU) 2019/235²⁰, 2014/276/EU²¹ and 2008/411/ES²², and other documents as specified in chapter H for 15 years.

Until the end of 2025 is required synchronization following the default synchronization scheme – Frame B (»DD DS UU DD DD«) from ECC Recommendation (20)03 where LTE and new radio – NR have a harmonized frame start, with frame duration of 5 ms. After 2025, when the full 5G NR implementation is expected, the holders of radio frequency allocation decisions in this band may propose another harmonized scheme. When defining a new synchronization scheme, the Agency will take into account proposals of the bidders who will have as result of the public tender together 80 MHz of more spectrum in this frequency band. In case of no agreement reached, Agency will define a new harmonised default synchronization scheme Frame A from ECC Recommendation (20)03 and decisions allocating radio frequencies shall be amended ex officio for this

²⁰ Izvedbeni sklep komisije (EU) 2019/235 z dne 24. januarja 2019 o spremembi Odločbe 2008/411/ES glede posodobitve ustreznih tehničnih pogojev za frekvenčni pas 3 400–3 800 MHz (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019D0235>)

²¹ Odločba komisije 2014/276/EU z dne 2. maja 2014 o uskladitvi frekvenčnega pasu 3 400–3 800 MHz za prizemne sisteme, ki lahko v Skupnosti zagotavljajo elektronske komunikacijske storitve (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AAOJ.L_.2014.139.01.0018.01.ENG)

²² Odločba Komisije 2008/411/ES z dne 21. maja 2008 o uskladitvi frekvenčnega pasu 3 400–3 800 MHz za prizemne sisteme, ki lahko v Skupnosti zagotavljajo elektronske komunikacijske storitve (<https://eur-lex.europa.eu/eli/dec/2008/411/oj/?locale=sl>)

frequency band. License holders will have to adjust their networks to the new synchronisation scheme or use guard bands inside of their assigned spectrum in this frequency band.

Default common reference phase clock is the GNSS technique as defined in the executive summary of ECC Report 216 and ECC Report 296.

If the holders of radio frequency allocation decisions agree differently, they may use the agreed common reference phase clock and the agreed synchronisation scheme different that the default. However, in the event of a harmful interference, they must switch to the default scheme/default common reference phase clock.

Cross-border synchronisation/Reference clock in coordination procedures is defined in the ECC Recommendation(15)01 version 2020, A5.1.1 Cross-border coordination based on synchronization.

Overview of the 3600 MHz frequency band is presented in the Figure below:

Figure A-8: Frequency band 3600 MHz

		BF01	BF02	BF03	BF04	BF05	BF06	BF07	BF08
BF09	BF10	BF11	BF12	BF13	BF14	BF15	BF16	BF17	BF18
BF19	BF20	BF21	BF22	BF23	BF24	BF25	BF26	BF27	BF28
BF29	BF30	BF31	BF32	BF33	BF34	BF35	BF36	BF37	BF38

Available from assignment for 15 years** (Table H-7: Overview of spectrum occupancy in the frequency band 3400 – 3800 MHz with existing rights)
Not available

A detailed list of radio frequencies is provided in the table below:

Table A-12: Blocks available in the 3600 MHz band

Block name	Frequencies	Bandwidth
BF01	3420 – 3430 MHz (TDD)	1 x 10 MHz
BF02	3430 – 3440 MHz (TDD)	1 x 10 MHz
BF03	3440 – 3450 MHz (TDD)	1 x 10 MHz
BF04	3450 – 3460 MHz (TDD)	1 x 10 MHz
BF05	3460 – 3470 MHz (TDD)	1 x 10 MHz
BF06	3470 – 3480 MHz (TDD)	1 x 10 MHz
BF07	3480 – 3490 MHz (TDD)	1 x 10 MHz
BF08	3490 – 3500 MHz (TDD)	1 x 10 MHz
BF09	3500 – 3510MHz (TDD)	1 x 10 MHz
BF10	3510 – 3520MHz (TDD)	1 x 10 MHz
BF11	3520 – 3530MHz (TDD)	1 x 10 MHz
BF12	3530 – 3540MHz (TDD)	1 x 10 MHz

BF13	3540 – 3550MHz (TDD)	1 x 10 MHz
BF14	3550 – 3560MHz (TDD)	1 x 10 MHz
BF15	3560 – 3570MHz (TDD)	1 x 10 MHz
BF16	3570 – 3580MHz (TDD)	1 x 10 MHz
BF17	3580 – 3590MHz (TDD)	1 x 10 MHz
BF18	3590 – 3600MHz (TDD)	1 x 10 MHz
BF19	3600 – 3610 MHz (TDD)	1 x 10 MHz
BF20	3610 – 3620 MHz (TDD)	1 x 10 MHz
BF21	3620 – 3630 MHz (TDD)	1 x 10 MHz
BF22	3630 – 3640 MHz (TDD)	1 x 10 MHz
BF23	3640 – 3650 MHz (TDD)	1 x 10 MHz
BF24	3650 – 3660 MHz (TDD)	1 x 10 MHz
BF25	3660 – 3670 MHz (TDD)	1 x 10 MHz
BF26	3670 – 3680 MHz (TDD)	1 x 10 MHz
BF27	3680 – 3690 MHz (TDD)	1 x 10 MHz
BF28	3690 – 3700 MHz (TDD)	1 x 10 MHz
BF29	3700 – 3710 MHz (TDD)	1 x 10 MHz
BF30	3710 – 3720 MHz (TDD)	1 x 10 MHz
BF31	3720 – 3730 MHz (TDD)	1 x 10 MHz
BF32	3730 – 3740 MHz (TDD)	1 x 10 MHz
BF33	3740 – 3750 MHz (TDD)	1 x 10 MHz
BF34	3750 – 3760 MHz (TDD)	1 x 10 MHz
BF35	3760 – 3770 MHz (TDD)	1 x 10 MHz
BF36	3770 – 3780 MHz (TDD)	1 x 10 MHz
BF37	3780 – 3790 MHz (TDD)	1 x 10 MHz
BF38	3790 – 3800 MHz (TDD)	1 x 10 MHz

For the purposes of bidding in the public auction, this frequency spectrum will be given in two categories of lots.

Detailed list of lots by category is provided in the table below:

Table A-13: Lots by category in the 3600 MHz band

Category	No. of lots	Included lots	Spectrum amount per lot	Frequency range
F	38	F_01 do F_38	1 x 10 MHz	Generic frequency lots in the range 3420 – 3800 MHz (TDD)

A.4.6 26 GHz TDD frequency band

The band includes a total of 1000 MHz of unpaired frequency spectrum between 26500 MHz and 27500 MHz. Five 200 MHz TDD blocks (from BG01 to BG05) shall be available in the public tender for terrestrial systems in the territory of the Republic of Slovenia capable of providing wireless broadband electronic

communications services in accordance with the Commission Implementing Decision (EU) 2020/590²³ and Decision (EU) 2019/784²⁴ and other documents as specified in chapter H for 15 years..

ECC Report 307, chapter 3.3 Frame structures discusses that many conclusions for the 3400 – 3800 MHz frequency range also hold for 26 GHz e.g. the frame structure lengths will have the same impact on latency. One of the key differences between the 3400 – 3800 MHz frequency range and the 26 GHz band is that there are no LTE deployments in the 26 GHz band. Thus, for the 26 GHz band the considerations relating to alignment of NR and LTE frame structures do not apply.

Until the end of 2025 is required synchronization following the default synchronization scheme – Frame B («DD DS UU DD DD») from ECC Recommendation (20)03 where LTE and new radio – NR have a harmonized frame start, with frame duration of 5 ms. After 2025, when the full 5G NR implementation is expected, the holders of radio frequency allocation decisions in this band may propose another harmonized scheme. When defining a new synchronization scheme, the Agency will take into account proposals of the bidders who will have as result of the public tender together 80 MHz of more spectrum in this frequency band. In case of no agreement reached, Agency will define a new harmonised default synchronization scheme Frame A from ECC Recommendation (20)03 and decisions allocating radio frequencies shall be amended ex officio for this frequency band. License holders will have to adjust their networks to the new synchronisation scheme or use guard bands inside of their assigned spectrum in this frequency band.

Default common reference phase clock is the GNSS technique as defined in the executive summary of ECC Report 216 and ECC Report 296..

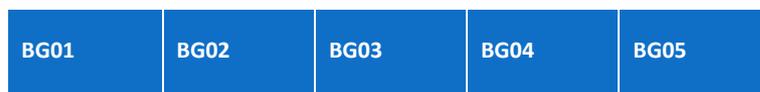
If the holders of radio frequency allocation decisions agree differently, they may use the agreed common reference phase clock and the agreed synchronisation scheme different that the default. However, in the event of a harmful interference, they must switch to the default scheme/default common reference phase clock.

If the holders of radio frequency allocation decisions use semi-synchronised or unsynchronised networks, they shall follow guidelines from ECC Report 307, chapter 7 – Conclusions.

In the 26 GHz band active sharing between all holders of radio frequency allocation decisions (including spectrum pooling), with a pre-emptive right in favour of the frequency allocation decision holder on its assigned sub-band is allowed.

Overview of the 26 GHz frequency band is presented in the Figure below:

Figure A-9: Frequency band 26 GHz



Available from assignment for 15 years

²³ Sklep Evropske komisije (EU) 2020/590 z dne 24. aprila 2020, ki spreminja tehnične pogoje za frekvenčni pas 24,25-27,5 GHz iz izvedbenega sklepa 2019/784 (https://eur-lex.europa.eu/eli/dec_impl/2020/590/oj)

²⁴ Sklep Evropske komisije (EU) 2019/784 z dne 14. maja 2019 o uskladitvi frekvenčnega pasu 24,25 – 27,5 GHz za prizemne sisteme, ki lahko zagotavljajo brezžične širokopasovne elektronske komunikacijske storitve v Uniji (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019D0784>)

A detailed list of radio frequencies is provided in the table below:

Table A-14: Blocks available in the 26 GHz band

Block name	Frequencies	Bandwidth
BG01	26500 – 26700 MHz	1 x 200 MHz
BG02	26700 – 26900 MHz	1 x 200 MHz
BG03	26900 – 27100 MHz	1 x 200 MHz
BG04	27100 – 27300 MHz	1 x 200 MHz
BG05	27300 – 27500 MHz	1 x 200 MHz

For the purposes of bidding in the public auction, this frequency spectrum is divided into one lot category.

Detailed list of lots by category is provided in the table below:

Table A-15: Lots by category in the 26 GHz band

Category	No. of lots	Included lots	Spectrum amount per lot	Frequency range
G	5	from G_01 to G_05	1 x 200 MHz	Generic frequency lots in the range 26500 – 27500 MHz (TDD)

A.5 Restrictions on the right of use

With the aim to ensure the effective competition, the Agency has determined spectral caps ensuring access to the radio frequency spectrum for a sufficient number of competitors and to limit the high asymmetry of the shares in the allocated spectrum or to prevent t. i. spectrum hoarding. Spectral caps shall also be taken into account when transferring or leasing of usage rights.

A.5.1 Spectrum caps

All bids in the public tender shall be subject to the following spectrum caps:

- 2 x 35 MHz in FDD bands: 700 MHz, 800 MHz and 900 MHz,
- 190 MHz in the following TDD bands: 2300 MHz and 3600 MHz,
- 800 MHz in 26 GHz TDD band,
- 425 MHz together in new frequency bands 700 MHz FDD, 2100 MHz FDD, 2300 MHz TDD and 3600 MHz TDD, including the existing spectrum holdings in frequency bands 800 MHz FDD, 900 MHz FDD, 1800 MHz FDD, 2600 MHz FDD and 2600 MHz TDD.

The total spectral cap of 425 MHz for FDD bands consists of both down link and up link spectrum (e.g. 2 x 10 MHz is a total 20 MHz of spectrum).

The restrictions regarding the number of assigned frequency rights in the form of spectrum caps shall be, in accordance with the provisions of Article 51 of ZEKom-1, also listed in the DARFs. The frequency caps listed shall be respected in the procedures determining the transfer or leasing of usage rights according to Article 55 of ZEKom-1, except in the event of changes in technology or competitive conditions, whereupon the Agency may, in line with the changes in circumstances, permit the transfer or leasing of usage rights for frequencies outside of the listed restrictions, in accordance with the provisions of Article 55 of ZEKom-1.

A.5.2 Procedures determining the transfer or leasing of usage rights

When transferring or leasing of usage rights all provisions from A.5.1 (Spectrum caps) and all obligations in A.6 (Conditions and requirements of the public tender).

In case of a merger of two operators, the coverage obligations shall be determined on the basis of the total spectrum of the operator after the merger in accordance with all provisions from A.6.4.2 (Coverage obligations).

A.6 Conditions and requirements of the public tender

A.6.1 Conditions of the public tender

To fulfil the conditions of the public tender, the applicant must:

- submit a complete and accurate application, which includes:
 - General information on the applicant (Form I.1.1 or I.1.2),
 - Applicant's statements (Form I.2),
 - Authorization for signing the application (Form I.3),
 - Information on the applicant's ownership structure (no form),
 - Financial, organizational, and technical plans for deployment and operation of a mobile communications network (business plan) (no form),
 - Nomination of 3 people who shall be authorized to submit bids for the applicant during the public auction (Form I.4),
 - Statement and confirmation of payment of the tender bond (Form I.5),
 - List of the frequency lots the applicant is interested in (initial bid) (Form I.6),
 - Statement on the submission of documents in accordance with the requirements of the tender documentation (Form I.7),
- Applicants must have settled all outstanding liabilities towards the Agency which are not the subject of legal proceedings,
- Applicants must be solvent and must not have any compulsory settlement proceedings initiated against them, nor bankruptcy nor forced liquidation proceedings.

An applicant is deemed solvent if it does not have any bank accounts blocked for more than 5 days at the time of the submission of the application, and for the duration of the public tender, until the issue of DARF.

Compulsory settlement proceedings are deemed initiated if a proposal for the launch of a compulsory settlement proceeding has been lodged, and the court has not yet decided on this proposal.

Bankruptcy proceedings are deemed initiated if the subject is already in a bankruptcy proceeding, or if a proposal for the launch of a bankruptcy proceeding has been lodged, and the court has not yet decided on this proposal.

Forced liquidation proceedings are deemed initiated if a proposal for the launch of forced liquidation proceedings has been lodged, and the court has not yet decided on this proposal, if its business operations

are being handled by the court for other reasons, or if it has suspended its business activities, or if it is in a similar position.

A description of the requirements for a complete and accurate application (from the first indent) is found in Chapter C.2 (Documents to be provided with the application).

A.6.2 Conditions to qualify for the public auction

As the offered price is the only criterion for selecting the winning bid, the selection shall be made through a public auction (paragraph 1 of Article 44 of ZEKom-1).

In order to qualify for the public auction in the public tender, the applicant must, along with fulfilling other conditions in accordance with Article A.6.1 (Conditions of the public tender), also fulfil the following two conditions:

- payment of a deposit for its initial bid, and
- payment of administrative costs.

A.6.2.1 Payment of a deposit for an initial bid

In order to participate in the public auction, the bidder must, at least one day before the beginning of the public auction, pay its deposit to a special bank account of the Republic of Slovenia and deliver to the Agency the confirmation of payment. The amount of this deposit must be at least the sum of the reserve price for all the lots included in the bidder's initial bid, in accordance with form I.6 (Initial Bid). All details regarding the transfer of the deposit (bank account, reference number, etc.) shall be detailed in the Decision on the Selection of Bidders.

The deposits of winning bidders shall be honoured as regards the payment of the fee for the efficient use of a limited natural resource. Unsuccessful bidders shall have their deposits returned after the end of the public auction within the deadline determined in the written decision from paragraph 6 of Article 45 of ZEKom-1.

Bidders which are excluded during the public auction due to violation of the requirements from A.6.3.1 (Protection of confidential information), A.6.3.2 (Prohibition of collusive behaviour), A.6.3.3 (Retaining the bidder's ownership structure during the public tender procedure) and F.2.10 (Breach of auction rules), shall not have their deposits returned.

If the public tender is annulled, the deposits shall be returned to the bidders within the deadline of 30 days.

No interest shall be paid for the deposits.

Transfer commissions and all other costs or taxes incurred during the transfer of funds must be paid by the bidder.

Deposits shall be returned (transferred) to the bank accounts indicated by the applicants.

A.6.2.2 Payment of administrative costs

In order to qualify for the public auction, the bidders must cover the administrative costs of holding a public auction (indent 2 of paragraph 2 of Article 44 of ZEKom-1). Before the beginning of the public auction each

bidder must settle advance payment of administrative costs in the amount of €x.xx. The Agency shall honour the tender bonds paid by the applicants which are selected as bidders by the Decision on the Selection of Bidders as advance payment of administrative costs in the same amount.

Administrative costs for holding a public auction represent all of the Agency's expenses in connection with preparing and holding a public auction, which shall not include the costs of the work of the Agency's full-time employees. Administrative costs are covered by all bidders in equal parts.

The advance amount paid by bidders for administrative costs shall be considered as advance payment of a share of the administrative costs.

Winning bidders must settle all additional payments in a lump sum within 15 days of the receipt of the written decision from paragraph 6 of Article 45 of ZEKom-1.

Similarly, the Agency shall within 15 days of issuing the written decision from paragraph 6 of Article 45 of ZEKom-1 return to bidders the difference in the advance payment, in the event that the amount of administrative costs shall be less than the advance amount paid by the bidders.

No interest shall be paid on the returned advance payment.

A.6.3 Requirements of the public tender

The requirements of the present public tender are:

- protection of confidential information,
- prohibition of collusive behaviour,
- preservation of the applicant's ownership structure during the public tender,
- additional obligations the applicant assumes in the public tender:
 - a restriction on the transfer or lease of rights to use radio frequencies,
 - general coverage obligations.

A.6.3.1 Protection of confidential information

The applicant must handle all information it receives from the Agency within the course of this procedure as confidential. Bidders are especially forbidden from communicating content and data from the Decision on the Selection of Bidders or any other decision within the scope of the public tender procedure, as well as from communicating their intentions regarding demand for frequencies or the bids they intend to submit within the course of the public tender or public auction. In the event the applicant or bidder violates this request, it shall be excluded from the public tender or public auction.

The obligation of keeping confidential all information received from the Agency remains in force until the issue of the written decision from paragraph 6 of Article 45 of ZEKom-1. The confidentiality obligations also apply to applicants which fail to be selected as bidders, as well as to bidders excluded during the course of the public auction. These must keep information confidential up until the moment that the winning bidders are issued the decision from paragraph 6 of Article 45 of ZEKom-1. In the event an applicant or bidder violates the confidentiality obligation, such an applicant forfeits the tender bond or the advance payment of administrative costs, as well as any already paid deposits.

A.6.3.2 Prohibition of collusive behaviour

Throughout the procedure, applicants and bidders must not enter into agreements or engage in any other behaviour that could have the effect of compromising the integrity of the tender procedure in accordance with the tender documentation and the Decision on the Initiation of the Public Tender.

Applicants are forbidden from establishing direct or indirect contact with each other or from exchanging information with the aim of influencing the outcome of the tender procedure.

In particular, the following actions during the tender procedure constitute collusive or prohibited behaviour:

- any coordination between applicants, especially with the intention of influencing the course or outcome of the tender procedure,
- disclosure of any information concerning participation in the public tender procedure,
- disclosure of bid amounts or bidding strategies, or other statements which could influence the participation or bidding behaviour of third parties,
- any announcements that might provide an indication of intended behaviour throughout the tender procedure,
- coordinating bidding in the public auction.

Applicants violating these rules may be excluded from further bidding. The obligations on collusive behaviour also apply to applicants which fail to be selected as bidders, as well as to bidders excluded during the course of the public auction. In the event an applicant or bidder violates the obligations on collusive behaviour, such an applicant forfeits the tender bond or the advance payment of administrative costs, as well as any already paid deposits.

Should such behaviour be discovered after the completion of the tender procedure or after issuing of the DARFs by any competent body, the Agency might launch a procedure for the revocation of such DARFs. In this event the fees paid for the efficient use of a limited natural resource as well as for administrative costs shall be forfeited.

A.6.3.3 Retaining the bidder's ownership structure during the public tender procedure

A bidder may not be linked to another bidder through ownership of a share exceeding a controlling interest, which is considered to be a stake in a given company which exceeds 25%. All bidders must operate as independent subjects.

Bids may also be submitted by consortia, joint ventures, associations of companies or other types of partnership. In such cases, the bidder must provide the information about the relationship between members and detailed information as specified in Section C.2.4 (Information on applicant's ownership (no Form)).

Any type of partnership participating in the public tender shall be deemed as one entity, which means that any such partnership may submit only one bid. The bid must also contain information on the ownership structure of all members of the partnership. A member of one partnership may not also participate as an independent bidder or a member of another partnership.

If a person holding an ownership stake in the bidder acts as a trustee or in a similar role for another bidder in this public tender, this must be stated in the bid, and information about actual ownership must be provided.

In the period between the submission of the bid and the issuing of the decision from Par. 6 Art. 45 of ZEKom-1, bidders must preserve the ownership structure as indicated in their application, and the ownership structure may not change in a way that would create a link between a bidder and any other bidder(s) participating in the public tender, as defined in this Section. In this case the bidder's ownership structure would no longer match the structure indicated in its application and comply with the requirements from first two paragraphs of this Section, and such an application shall consequently be excluded from the procedure. These restrictions also apply to partnership members.

Details on submitting and handling joint tenders are defined in Section C.2.4 (Information on applicant's ownership (no Form)).

The Agency may call on a bidder to report about their ownership structure at any point of the procedure.

If the tender commission reviewing the bids determines a connection as described above between two or more bidders that submitted the bids separately and not as a group, it shall notify all the affected bidders and set a deadline for them to clarify which of the bids should be accepted as valid. If they fail to provide a clarification or select several different bids, all their submitted bids shall be excluded from the procedure.

If a connection between two or more bidders is established at a later date, after the bids have been examined²⁵, and this was the result of unclear information about their ownership structure, all the involved bidders shall be excluded from the procedure. In this event, any amounts paid as bid guarantees, advance payments of administrative cost or deposits shall not be refunded to these bidders.

A.6.4 Additional obligations

A.6.4.1 Restrictions on the transfer or leasing of usage rights

All restrictions on the transfer or leasing of usage rights from Chapter A.5.2 (Procedures determining the transfer or leasing of usage rights) apply as requirements.

A.6.4.2 Coverage obligations

All requirements from this Chapter will be included in selected bidder's DARF as coverage obligations, according to the allocated radio frequencies (Art. 51 of ZEKom-1).

Details on monitoring of fulfilment of all obligations are listed in Chapter G (Monitoring the fulfilment of coverage obligations). If operators who get the DARF do not fulfil listed obligations, Agency could in inspection procedure order the elimination of the established irregularity and impose a fine and/or confiscation against legal property gain in misdemeanour proceeding. Agency could on the basis of provisions from Art. 58 of ZEKom-1 also begin with the procedure of annulment of the DARF. In such cases the fee for the efficient use of a limited natural resource is non-refundable.

²⁵ This may mean that the tender commission did not detect such a connection when examining the bids, because it was unclear or hard to determine from the bids, but determined the connection later, when reexamining the ownership structure due to unusual bidding; in this case all the involved bidders shall be excluded from the procedure.

A.6.4.2.1 General coverage obligations

The applicants who acquire the frequency spectrum in any of the radio frequency bands will be required to offer commercially available wireless broadband terrestrial wireless broadband electronic communications services in each of the acquired radio frequency bands in a way:

- to start using these frequencies and offering services to end-users on these frequencies in at least one major city within one year after the availability of an individual radio frequency band (Table A-16),
- within five (5) years after the availability of an individual radio frequency band to use all frequencies in the entire acquired radio frequency band and offer services to end users on all these frequencies at least in each major city (Table A-16).

These time limits do not apply to the frequencies in the 700 MHz, SDL, 1500 MHz SDL and 26 GHz bands, which are considered to be used and to offer services to end-users on these frequencies in at least one major city (Table A-16) within five (5) years from availability.

The provision to offer commercially available wireless broadband terrestrial wireless broadband electronic communications services means that this service is provided through base stations covering at least 75% of the population of an individual settlement of the major city, and the start of the use of radio frequencies means that the services must be provided through at least one base station in an individual city settlements.

Fulfilment of this obligation depends on the market availability of terminals and base stations. In the case that terminals and base stations for an individual radio frequency band are not available, the operator shall provide appropriate evidence. The Agency will postpone the deadline for compliance on the basis of relevant evidence.

A.6.4.2.2 Additional coverage obligations for 700 MHz FDD band

The applicants who acquire spectrum in 700 MHz FDD band will have to by using any of the frequencies available to that operator provide the coverage in accordance with provisions of that Chapter. Applicants who own radio frequency spectrum below 1 GHz on the day of the launch of the tender, will need till 31. 12. 2025 provide coverage of:

- 99% of Motorways and highways and inhabitants of the Republic of Slovenia,
- at least 60% of main roads and regional roads I and II,
- at least 60% of the active railways with passenger traffic, in train coverage is under responsibility of Railways

Applicants who do not own radio frequency spectrum below 1 GHz on the day of the launch of the tender, will need provide the above coverage till 31. 12. 2028.

Providing coverage of roads and railways means to offer broadband mobile communication services with a user experience of throughput of at least 10 Mb/s from the base station to the mobile user terminal and 2 Mbit/s from user terminal to base station (outdoor) with RSRP level - 108 dBm.

The user experience of throughput of at least 10 Mb/s from the base station to the mobile user terminal and 2 Mb/s from user terminal to base station (outdoor) means that the result of the measurements of the throughput performed at the user terminal through the Agency's approved application on the Agency's measuring server (e.g. AKOS Test Net), reaches at least 10 Mb/s in 90% of the measurements. In this case, measurements outside of the peak hour are taken into account. The main peak for a maximum of 2 hours shall be determined by operators which are awarded for his network and send to the Agency in 30 days after the day of issuing the DARF and the peak hours shall be notified by the Agency.

All these obligations are to be fulfilled completely, if there are no administrative constraints in getting new locations. In case, that such administrative constraints exist, the operator shall provide appropriate evidence. In that case, the Agency evaluates the evidence and takes these administrative constraints into account, when monitoring the fulfilment of coverage obligations and sets a new deadline for obligations.

Providing population coverage by offering commercial wireless broadband terrestrial wireless broadband electronic communications services in the 700 MHz FDD band means:

- a) For applicants and bidders who will have as result of the public tender together with their existing spectrum less than 2 x 30 MHz spectrum below 1 GHz to offer broadband mobile communication services with a user experience of throughput of at least 10 Mb/s from the base station to the mobile user terminal and 2 Mbit/s from user terminal to base station (outdoor) with RSRP level - 108 dBm.

The user experience of throughput of at least 10 Mb/s from the base station to the mobile user terminal and 2 Mb/s from user terminal to base station (outdoor) means that the result of the measurements of the throughput performed at the user terminal through the Agency's approved application on the Agency's measuring server (e.g. AKOS Test Net), reaches at least 10 Mb/s in 90% of the measurements. In this case, measurements outside of the peak hour are taken into account. The main peak for a maximum of 2 hours shall be determined by operators which are awarded for his network and send to the Agency in 30 days after the day of issuing the DARF and the peak hours shall be notified by the Agency.

- b) For applicants and bidders who will have as result of the public tender together with their existing spectrum 2 x 30 MHz spectrum below 1 GHz or more to offer broadband mobile communication services with a user experience of throughput of at least 30 Mb/s from the base station to the mobile user terminal and 3 Mbit/s from user terminal to base station (outdoor) with RSRP level -108 dBm.

The user experience of throughput of at least 30 Mb/s from the base station to the mobile user terminal and 3 Mb/s from user terminal to base station (outdoor) means that the result of the measurements of the throughput performed at the user terminal through the Agency's approved application on the Agency's measuring server (e.g. AKOS Test Net), reaches at least 30 Mb/s in 90% of the measurements. In this case, measurements outside of the peak hour are taken into account. The main peak for a maximum of 2 hours shall be determined by operators which are awarded for his network and send to the Agency in 30 days after the day of issuing the DARF and the peak hours shall be notified by the Agency.

A.6.4.3 Coverage obligations in accordance with »5G Action Plan for Europe«

Fulfilment of coverage obligations in accordance with 5G Action Plan for Europe is based on availability of terminals, network software and standards. In case, that required features are not available, the operator shall provide appropriate evidence. The Agency will postpone the deadline for compliance on the basis of relevant evidence.

Providing 5G technology means that the operator supports 3GPP Release 15 or a newer specification (ETSI EN 301 908-x standards).

5G coverage obligations mean that any applicant who wins in the public tender spectrum in frequency bands 700 MHz FDD and 3600 MHz TDD, as well as in frequency bands 2100 MHz and 2300 MHz due to possibilities of offering comparable services, will need to fulfil the following requirements:

- in 3 months after issuing DARF start offering commercial 5G services in at least one frequency band in at least one major city (Providing services means that this 5G service is provided through base stations covering at least 75% of the population of an individual settlement of the individual major city, where for the beginning of the use of radio frequencies and start offering services is required that the 5G service is provided through at least one base station in at least one settlement of one major city.
- Table A-16,
- till 31. 12. 2025 provide commercial 5G services in all major cities and support of massive IoT networks. Any applicant who wins in the public tender at least 70 MHz of contiguous spectrum has to provide as well functionality and support of enhanced mobile broadband access (eMBB).

Providing services means that this 5G service is provided through base stations covering at least 75% of the population of an individual settlement of the individual major city, where for the beginning of the use of radio frequencies and start offering services is required that the 5G service is provided through at least one base station in at least one settlement of one major city.

Table A-16: List of major cities

Major cities ²⁶		
Ljubljana	Celje	Ptuj
Maribor	Novo mesto	Murska Sobota
Kranj	Velenje	Slovenj Gradec
Koper	Nova Gorica	

Source: AKOS, summarised after Act on the Establishment of Municipalities and on the Determination of Their Areas, Art.3

A.6.5 Network sharing

In order to ensure efficient use of radio spectrum, improve coverage and reduce environmental impact, the Agency shall promote the following sharing options:

- sharing of passive or active infrastructure or spectrum pooling,
- business arrangements on national roaming,
- joint deployment of infrastructure for the provision of networks and services based on the use of radio frequency spectrum.

Active sharing and frequency pooling is allowed within a framework that does not limit infrastructural competition. For example, sharing of active equipment and frequency pooling are permitted when passive sharing is not sufficient, for example in challenging areas and in roll out of small cells (Chapter A.6.5.1 (Allowance of frequency pooling and active sharing in challenging areas)).

A.6.5.1 Allowance of frequency pooling and active sharing in challenging areas

In hard-to-reach areas of Slovenia, such as:

- Triglav National Park (Chapter J.2, Table J-3: Settlements in Triglav National Park (TNP and Settlements in other areas difficult to reach),

²⁶ Meje mestnih naselij so določene z mejami posameznega naselja iz podatkovne baze Registra prostorskih enot Geodetske uprave RS (<https://www.e-prostor.gov.si/zbirke-prostorskih-podatkov/nepremicnine/register-prostorskih-enot/>)

- Settlements of 2nd priority (Chapter J.2, Table J-3: Settlements in Triglav National Park (TNP and Settlements in other areas difficult to reach),
- Road and railway tunnels,
- Critical road sections (Chapter J.1, Table J-1: Motorways, highways, main roads and regional roads category I and II and Chapter J.2, Table J-2: Regional roads category III touristic roads),
- in regions of Slovene border and Piran bay,
- in regions exceeding 60% of active railways with passenger,
- in regions exceeding 60% of main roads and regional roads category I and II,
- on historical monuments and other buildings under protection of Cultural heritage,
- for small cells if there is a restriction on space interventions/building restrictions,
- and indoor.

frequency pooling, active equipment sharing and national roaming are allowed.

A.6.5.2 Sharing of passive infrastructure and local agreements on national roaming

In circumstances when the market-driven deployment of infrastructure for the provision of networks or services which rely on the use of radio spectrum is subject to insurmountable economic or physical obstacles and therefore access to networks or services by end-users is absent, will Agency impose to the applicants who will acquire radio spectrum in this public tender for the period of DARF duration obligations in relation to the sharing of passive infrastructure or obligations to conclude localised roaming access agreements.

In circumstances where access to and sharing of passive infrastructure alone is not sufficient to resolve this situation, the Agency may impose obligations to share active infrastructure.

The Agency will include the above-mentioned options as potential liabilities in the DARF for the applicants who will acquire radio spectrum in this public tender.

A.7 Security requirements

Bidders who are awarded any part of the spectrum in this public tender shall have to comply with the relevant national and European legislation, and internationally recognized standards and best practices in networks and services security and operational continuity, and introduce and maintain adequate and proportionate organizational and technical measures for managing risks to the security and safety of information systems, networks and services. The measures must provide the level of security adequate for the estimated risk, including risks that arise from relationships and agreements of suppliers of information systems, network equipment, and features and services. When selecting suppliers, the bidder must carry out a risk assessment that comprises all the relevant risks linked to the ownership, delivery, quality and transparency of engineering practices and security controls, from the aspect of operational continuity, while taking onto account any national security guidelines from the Government of the Republic of Slovenia.

B Explanations to the tender documentation

The bidder taking part in the public tender must submit a complete bid prepared in accordance with the decision on the launch of the public tender and the tender documentation. The tender documentation is published on the Agency's website www.akos-rs.si.

If an interested party requires any explanations regarding the tender documentation, the procedure of the public tender, or the subject of the public tender, they must request so in writing and in Slovenian. They should address their written request to the Agency (Agencija za pošto in elektronske komunikacije RS, Stegne 7, 1000 Ljubljana) with the caption **»POJASNILA V ZVEZI JAVNIM RAZPISOM Z JAVNO DRAŽBO ZA DODELITEV RADIJSKIH FREKVENC ZA ZAGOTAVLJANJE JAVNIH KOMUNIKACIJSKIH STORITEV KONČNIM UPORABNIKOM V RADIOFREKVENČNIH PASOVIH 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz in 26 GHz«** (In English: *»EXPLANATIONS REGARDING THE PUBLIC TENDER WITH PUBLIC AUCTION FOR THE AWARD OF RADIO FREQUENCIES FOR PROVISION OF PUBLIC COMMUNICATIONS SERVICES IN RADIO FREQUENCY BANDS 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz AND 26 GHz«*), or by email to: info.box@akos-rs.si.

The Agency must receive questions in writing by dd. mm. yyyy. The Agency shall not respond to questions received after this deadline.

The Agency shall publish the received questions and answers to them, on its website www.akos-rs.si (under the heading: "Javna posvetovanja in razpisi"), and on dd. mm. yyyy at the latest, whereby it shall be deemed that all the interested bidders have been informed of them. The questions received and the answers to them shall be published in such a way as to not reveal the identity of the interested party posing the question.

The questions and the answers to them do not present an integral part of the tender.

C The preparation of the tender application

C.1 The preparation and submission of the tender application

Interested natural persons and companies that are entitled to take part in the public tender must submit their tender applications to the Agency by dd. mm. yyyy at 10 AM in the Agency's local time at the latest. The tender applications must be prepared in accordance with the Decision on Initiating a Public Tender and the tender documentation.

The application must be submitted in one (1) original and one (1) copy. If any differences between the two are found, the original prevails.

The original application must be printed or written in such a way that text cannot be deleted.

C.1.1 The language of the tender application

The application that the bidder prepares, as well as all correspondence and all the documents pertaining to the application, must be in the Slovenian language or translated into Slovenian. The exception to this rule can only relate to the standard catalogues, reference lists, brochures and similar. Such documents may be in the English language.

It must be clear on all the translated documents that they were translated by a sworn interpreter.

If the Agency upon reviewing and assessing the applications finds that a part of an application which was not submitted in Slovenian language should be translated into Slovenian, it may request the applicant to do so at its own cost, and set an appropriate deadline for this. If the applicant does not adhere to this request, the application shall be deemed as incomplete.

C.1.2 Binding

All the pages of the application must be bound with a tricolored ribbon or string, with both ends on the back or the front side sealed with sealing wax or tape, and the seal secured with a stamp or signature of the person undersigning the application. The type of binding described is a summary from Article 35 of Notary Act (Official Gazette of the RS, no. 2/2007 – UBP3, 33/2007-ZSReg-B, 45/2008, 91/2013). An overview of the application must be possible without damaging the seal wax or tape or the string. Binding with a tricolored ribbon or string is required only for the original.

C.1.3 Signature

The original copy of the application must be signed by the legal representative of the applicant or a person authorized by them. If the application is signed by an authorized person, the authorization must be made using the template in the appendix I.3 (Authorization for signing the application), which is part of the application. The original copy must be signed on all the appendices, where signature is required. The legal

representative of the applicant or a person authorized by them must initial each page of the application. The same holds if the applicant is a natural person.

C.1.4 Amendments to the application

The application must not have any changes or amendments (corrections), except for those that the applicant made to correct the errors before submitting the application. In such a case the changes or amendments (corrections) must be initialled by the person who signed the application.

Original text that was altered by a change or amendment, must remain visible.

C.1.5 Information accuracy and completeness

The applicant or the bidder can at any time be excluded from the public tender procedure if it is found that the application included incorrect or untrue data. In the event of an exclusion for these reasons the applicant receives the amounts already paid for the tender bond or the bidder with the advance on administrative costs and already paid in deposits. It is also possible that upon a subsequent discovery that incorrect or untrue data was provided in the application, a DARF already issued may be revoked, in which case administrative costs and payments made for the efficient use of a natural resource by the bidder would not be reimbursed.

C.2 Documents to be provided with the application

This segment lists all the documents that the applicant must attach to their application. If a special form of a document (form) is required, this is stated for an individual document.

The applicant must attach the documents in the order listed below:

- General information on the applicant (Form I.1.1 or I.1.2),
- Applicant's statements (Form I.2),
- Authorization for signing the application (Form I.3),
- Information on the applicant's ownership structure (no form),
- Financial, organizational, and technical plans for deployment and operation of a mobile communications network (business plan) (no form),
- Nomination of 3 people who shall be authorized to submit bids for the applicant during the public auction (Form I.4),
- Statement and confirmation of payment of the tender bond (Form I.5),
- List of the frequency lots the applicant is interested in (Initial Bid) (Form I.6),
- Statement on the submission of documents in accordance with the requirements of the tender documentation (Form I.7).

In the event an applicant does not fill out a certain field in the form, it must strike through such field.

C.2.1 General information on the applicant (Form I.1.1 or I.1.2)

The applicant must attach to the application a correctly and completely filled out Form I.1.1 or I.1.2, which should include the following information on the applicant:

- for companies: company name, business address, headquarters, company registration number and VAT ID number, contact information, name of the legal representative, and any other persons authorized for representing the company, their signatures, and bank account information (Form I.1.1). The form must be signed by the applicant's legal representative or authorized person,
- for natural persons: full name, permanent and temporary address, registration number and VAT ID number, contact information, signature, and bank account information (Form I.1.2).

The data on the fax number are optional. The data on the authorized person are obligatory only if the applicant appointed an authorized person with the Form I.3 (Authorization for signing the application).

Applicants not registered in the Republic of Slovenia (hereinafter referred to as: "foreign applicants") should list an address for receiving mail²⁷ in Slovenia to which any written correspondence, especially notifications, calls, and decisions connected to the public tender procedure may be sent, and information on the person or persons who are authorized for receiving such documents, along with appropriate authorizations. Foreign applicants, which are legal entities, must also attach a copy of their articles of association.

C.2.2 Applicant's statements (Form I.2)

The applicant must attach to the application a correctly and completely filled out Form I.2, which should include the following statements:

- the statement that it is familiar with the content of the tender documentation in Public Tender for the Assignment of Radio Frequencies for providing public communications services, and that it accepts its provisions,
- a statement that its application is valid until 18 months from the submission of the application,
- the statement that all the data in the application are true and accurate, and that it agrees that the Agency may annul the issued DARFs without returning the payment for the efficient use of a limited natural resource if it is found after the completion of the public tender procedure that the applicant provided false or untrue data in its application, or in the event that such facts come to light during the public tender procedure the Agency shall not return the already paid tender bonds or the advance for the administrative costs and the already paid deposits,
- the statement that the applicant is solvent, and there are no procedures of bankruptcy, compulsory settlement, compulsory liquidation, or removal from the court registry without liquidation launched against it, and that there is no valid reason that its current operations or any court or other procedures that the applicant is involved in could cause such procedures to be initiated,

²⁷ In accordance of the provisions of paragraph one of Article 57 of the General Administrative Procedure Act (Official Gazette of the Republic of Slovenia no. 24/2006-UPB2, 105/2006-ZUS-1, 126/2007, 65/2008, 47/2009 Supreme Court ruling: U-I-54/06-32 (48/2009 rev.), 8/2010, 82/2013)

- the statement that the applicant shall maintain its ownership structure, as stated in this application, until the issue of the decision from paragraph 6 of Article 45 of ZEKom-1, and that it shall not have changes in ownership in a way that would be in opposition to the requirements of the public tender,
- the statement that it shall adhere to the provisions of the tender documentation regarding information confidentiality as regards the public tender, and regarding the prohibition of collusion, and that it shall not act in such a way that could threaten the integrity of the public tender procedure, and that it agrees that the Agency may annul the issued decisions on the assignment of radio frequencies, if it is found after the completion of the public tender procedure that the applicant acted in such a way, or in the event that such findings occur during the course of the public tender, the applicant shall not receive the returned payment for the tender bond, nor the advance of administrative costs, and the already paid deposits.

C.2.3 Authorization for signing the application (Form I.3)

In the event the application is not signed by the applicant's legal representative, the application must have attached the authorization of the legal representative, with which it authorizes a certain natural person for signing the bid. The same holds if the applicant is a natural person.

In the event the applicant does not authorize anyone to sign the application, it must still attach this form to the application, with all the data input fields on the form struck through. The form must be initialized.

C.2.4 Information on applicant's ownership (no Form)

Each legal person applying must attach to the application the data on the value and structure of their equity, including the complete ownership structure of the applicant. This data must allow the Agency to ascertain who the owner of the applicant is, and in what scope different applicants might be connected through a common owner or interconnected through common shares.

In case of consortiums, joint ventures, associations of companies or other types of joint cooperation, the application must also include the information on the relationships between the members, and detailed data on:

- consortium agreements,
- joint venture agreements,
- shareholder agreements, and
- other acts that detail cooperation.

All types of cooperation are treated as a legal entity and in the course of the public tender treated as "groups".

In the case of a joint application to the tender, the group must attach an appropriate act on joint participation in the public tender procedure, which must contain at least:

- list of all contractors in the group (name and address of the contractor, legal representative, registration number, tax number, transaction account number),
- authorization to the leading contractor of the group,
- unlimited joint and several liability of all parties in the group,
- method of payment through the leading contractor of the group,

- provisions in case of any of the parties leaving the group,
- settlement of disputes between members of the group,
- other possible rights and obligations between the members of the group,
- the period of validity of the legal act.

The application must contain information on the ownership structure of all members of the group.

C.2.5 Financial, organizational and technical plan (no Form)

The applicant must also submit a description of financial, organizational and technical plans, and their visions regarding the execution, use of technology, mobile network and service management in 5,000 characters or less (business plan).

C.2.6 The appointment of three authorized bidding persons (Form I.4)

The applicant must fill out the Form I.4, which is for the appointment of three persons who shall be authorized to issue bids during the public auction.

C.2.7 Initial Bid (Form I.6)

The applicant must fill out the Form I.6 in which it has to list the lots for which it wishes to obtain at reserve price and is treated as initial bid. The amount of actual payment for radio frequencies will depend on auction results. The initial bid is binding and shall be made in accordance with spectrum caps as described in chapter A.5.1 (Spectrum caps).

The applicant must fill in the Form I.6 completely, even if it does not wish to submit a bid for individual lots in individual frequency bands. In this case it must write the number zero (0) in the section of the form on the number of lots in the individual frequency band that they do not to submit a bid on, and sign, stamp and initial the form.

The applicant's legal representative or the person authorized for signing the application must fill out and sign the initial bid, whereby they must not delete and/or add anything, except where the form format requires them to do so. The same holds if the applicant is a natural person. This application represents the bidder's initial bid at the start of the public auction (see chapter F (Auction rules)).

In accordance with paragraph 1 of Article 43 of ZEKom-1 all the applicants whose applications do not meet these requirements shall be excluded from further procedure. In the case of the public tender, the indication of lots that are the subject of the public tender may not be the subject of a supplement (Form I.6). An application that does not include the required forms or where these forms are not correctly filled in shall be excluded from further procedure.

C.2.8 Statement of payment of the tender bond (Form I.5)

The applicant must include the receipt for the payment of the tender bond in the amount of € x,xx . Details regarding the payment are listed in Form I.5.

If an applicant does not attach the required tender bond, as required in the tender documentation, their application shall be considered to be incomplete.

The Agency shall recognize the amounts from tender bonds by the applicants that shall become bidders after receiving a decision, as payment of advances for administrative costs in the same amount (see chapter A.6.2.2 (Payment of administrative costs)).

The Agency shall return the tender bonds to the applicants which were not selected as bidders within 15 days after the decisions from paragraph 6 of Article 45 of ZEKom-1 are issued to winning bidders, in the event that they fulfil the requirements from Chapters A.6.3.1 (Protection of confidential information), A.6.3.2 (Prohibition of collusive) and A.6.3.3 (Retaining the bidder's ownership structure during the public tender procedure).

C.3 Sealing and labelling the bid

The original and the copy of the application must be each enclosed in its own envelope marked "Original" or "Copy", respectively, with both envelopes enclosed in one envelope and marked: **»PONUDBA NA JAVNI RAZPIS Z JAVNO DRAŽBO ZA DODELITEV RADIJSKIH FREKVENC ZA ZAGOTAVLJANJE JAVNIH KOMUNIKACIJSKIH STORITEV KONČNIM UPORABNIKOM V RADIOFREKVENČNIH PASOVIIH 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz in 26 GHz – NE ODPIRAJ«** (In English: *»APPLICATION FOR THE PUBLIC TENDER WITH PUBLIC AUCTION FOR THE AWARD OF RADIO FREQUENCIES FOR PROVISION OF PUBLIC COMMUNICATIONS SERVICES IN RADIO FREQUENCY BANDS 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz AND 26 GHz – DO NOT OPEN«*), and addressed to the Agency: Agencija za komunikacijska omrežja in storitve Republike Slovenije, Stegne 7, SI-1000 Ljubljana. The applicant must also write their full address to the enclosing envelope for both. The envelope must be sealed or closed in such a way that it is possible to make sure at the public opening of applications that it has not been opened until then.

In accordance with the provisions of paragraph 4 of Article 41 of ZEKom-1 any applications that shall not be labeled correctly shall not be opened at the public opening (see chapter E.1 (Procedure of publicly opening applications)).

C.4 Deadline for submitting applications

The applications must be delivered to the Agency's address by dd. mm. yyyy at 10 AM local time at the latest.

The applicants may submit their applications personally at the Agency's mailroom on the first floor at the address Stegne 7, Ljubljana any workday between 8:30 AM and 2 PM, or until 10 AM on the deadline date. Because this is an anonymous public tender, the applicant shall receive a code for their application upon submission, which it shall confirm with its signature. Each application shall be handled under that code at the public opening of applications. The application may be submitted by the legal representative of the applicant or a person authorized by the legal representative of the applicant, and in this case they must present their authorization and a personal ID. The same holds if the applicant is a natural person.

The Agency official in charge of accepting applications shall issue a receipt upon receiving the applications. Under the conditions of the public tender the applicant must treat their code as confidential. The applicant must take all the measures to ensure that the Agency receives the application until the deadline set, and they are responsible for any risks connected to transferring the application, including acts of force majeure.

C.5 Late application submission

The Agency shall not accept any applications, amends to applications, or replaced applications received at the Agency's address after the deadline for submission stated in the tender documentation has passed, and shall return them to sender unopened.

C.6 Changes, amendments, replacements or withdrawal of the application

Applicants may until the deadline for submitting the applications change, amend, replace or withdraw bids, if they notify the Agency of the change in writing and in the method detailed in Article C.4 (Deadline for submitting applications). The applicant must present the code they received upon submission of their application when changing, amending, replacing, or withdrawing their application.

The notification on the change or amendment must be clearly labeled on the envelope as follows: **»PONUDBA NA JAVNI RAZPIS Z JAVNO DRAŽBO ZA DODELITEV RADIJSKIH FREKVENC ZA ZAGOTAVLJANJE JAVNIH KOMUNIKACIJSKIH STORITEV KONČNIM UPORABNIKOM V RADIOFREKVENČNIH PASOVIH 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz in 26 GHz«– SPREMEMBA /DOPOLNITEV PONUDBE"** (In English: *» APPLICATION FOR THE PUBLIC TENDER WITH PUBLIC AUCTION FOR THE AWARD OF RADIO FREQUENCIES FOR PROVISION OF PUBLIC COMMUNICATIONS SERVICES IN RADIO FREQUENCY BANDS 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz AND 26 GHz – CHANGE/AMENDMENT TO THE APPLICATION«*).

In the event the applicant replaces their application with a new application, they must at the same time withdraw their old application from the public tender. The withdrawal notice must be received by the Agency by the deadline for submissions, and it must be given in writing. The withdrawal notice must be clearly labelled on the envelope as follows: **» UMIK PONUDBE NA JAVNI RAZPIS Z JAVNO DRAŽBO ZA DODELITEV RADIJSKIH FREKVENC ZA ZAGOTAVLJANJE JAVNIH KOMUNIKACIJSKIH STORITEV KONČNIM UPORABNIKOM V RADIOFREKVENČNIH PASOVIH 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz in 26 GHz«** (In English: *»WITHDRAWAL OF THE APPLICATION FOR THE PUBLIC TENDER WITH PUBLIC AUCTION FOR THE AWARD OF RADIO FREQUENCIES FOR PROVISION OF PUBLIC COMMUNICATIONS SERVICES IN RADIO FREQUENCY BANDS 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz AND 26 GHz«*), and the applicant must deliver it to the Agency's address in the same way that is defined in Chapter C.4 Deadline for submitting applications for submitting the application.

The documentation that refers to the change, amendment, or replacement of the application must be prepared in accordance with chapter C.2 (Documents to be provided with the application), and addressed to the Agency.

The Agency shall return the withdrawn applications unopened to the applicants before the public bid opening.

D Additional information regarding the public tender

D.1 Costs for preparing an application

The applicant covers all costs in connection with preparing and submitting an application. Under no circumstance shall the Agency be responsible for any potential damage which might arise as a result of this, regardless of how the public tender and public auction procedures are carried out or of the final applicant selection.

D.2 Legal order

The legal order of the Republic of Slovenia shall be used in resolving potential legal questions related to the holding of the public tender and public auction.

D.3 Notifications related to the public tender

If additional information which is not supplied in the tender documentation must be acquired for the preparation of a correct application, the applicant must obtain it at its own expense.

The Agency assumes no responsibility in connection with any information which might be spread by word of mouth, or in a way that is not in accordance with the requirements of the tender documentation.

D.4 Changes or supplements to the decision on initiating a public tender and the tender documentation

The Agency may alter the Decision on Initiating a Public Tender, and if so must, in line with the extent of the changes, also extend the deadline for submitting applications. All interested applicants must be equally and transparently informed about any changes. The Agency shall publish a potential new decision in the Official Gazette of the Republic of Slovenia at least 7 days before the deadline set for submitting applications (paragraph 6 of Article 38 of ZEKom-1), as well as on the Agency's website www.akos-rs.si.

The Agency reserves the right to change or supplement the tender documentation. In the event, that the tender documentation is altered or supplemented, any change or supplement will be published on the Agency's website, by dd. mm. yyyy at the latest. In the event of a change or supplement to the tender documentation, the applicant must take such change or supplement into account in its entirety when preparing its application.

D.5 Annulment of the public tender

The Agency reserves the right at any point up to the issue of a DARF on the basis of the public tender to annul the public tender. A decision on the annulment of the public tender is published in the Official Gazette of the Republic of Slovenia.

E Opening and reviewing applications

In accordance with paragraph 2 of Article 37 of ZEKom-1 the public invitation to tender shall be conducted by a special impartial commission (hereinafter: commission) appointed by the director of the Agency.

E.1 Procedure of publicly opening applications

The Agency shall publicly open applications which were properly marked and submitted on time on dd. mm. yyyy at 14:00 in the time zone at the Agency's headquarters in the Agency's conference room (Stegne 7, 1000 Ljubljana).

In accordance with provisions from paragraph 2 of Article 41 of ZEKom-1, the public tender is anonymous, so instead of the data on applicants' names, their codes shall be used in the public opening of applications. Bidders' codes shall be allocated by the Agency upon the submission of applications.

At the public opening of applications, all provisions from Chapter A.6.3.1 (Protection of confidential information) of the tender documentation shall apply. Those in attendance must record their presence on the list of those in attendance.

At the opening of applications, the Agency shall, upon inspection, determine whether the applications meet the following criteria:

- it was submitted on time, in accordance with Chapter C.4 (Deadline for submitting applications of the tender documentation),
- it is sealed and marked in accordance with Chapter C.3 of the tender documentation, (Sealing and labelling the bid),
- it is properly bound in accordance with Chapter C.1.2 (Binding),
- it has been prepared in accordance with Chapter C.2 (Documents to be provided with the application)(Formal Completeness) of the tender documentation, which it does by verifying the presence of the following documents:
 - General information on the applicant (Form I.1.1 or I.1.2),
 - Applicant's statements (Form I.2),
 - Authorization for signing the application (Form I.3),
 - Information on the applicant's ownership structure (no form),
 - Financial, organizational, and technical plans for deployment and operation of a mobile communications network (business plan) (no form),
 - Nomination of 3 people who shall be authorized to submit bids for the applicant during the public auction (Form I.4),
 - Statement and confirmation of payment of the tender bond (Form I.5),
 - List of the frequency lots the applicant is interested in (initial bid) (Form I.6) and
 - Statement on the submission of documents in accordance with the requirements of the tender documentation (Form I.7),

and in accordance with Chapter C.1.3 (Signature), check the signatures in all required places as well as initials on each page of the Application.

The public opening shall be recorded. The Agency shall keep minutes on the opening of applications according to the consecutive number of applications. Members of the tender commission in attendance all sign the minutes at the end of the public opening.

E.2 Review of applications

In the next phase, the Agency verifies the completeness and accuracy of the applications' content.

A proper application is one whose documents (from I: Forms of the Tender Documentation) have been filled out in their entirety in all the required fields and whose content conforms to the requirements of the law and the tender documentation. Inconsequential typos do not affect the accuracy of an application. However, applications shall be considered improper inasmuch as they significantly alter an applicant's rights and obligations under the tender documentation.

E.2.1 Supplements and clarifications to an application

The Agency shall within 5 days of the opening of applications invite applicants that submitted incomplete applications to supplement them. The deadline for supplementing shall thereupon be no less than 8 and no more than 15 days.

Incomplete applications, which are not supplemented by the applicant within the required deadline, are rejected.

In the case of this public tender, the indication of lots of the subject of the public tender may not be the subject of a supplement (FORM I.6). An application which does not contain the indicated forms or which in relation thereto are improper shall be excluded from the procedure.

The Agency may request from individual applicants a clarification of their application, but in doing so may not request, allow, or suggest any change or supplement to the content of the application. Applicants must send clarifications within the deadline and use the method the Agency determines.

The tender commission shall draft a report in which it shall be indicated whether an individual applicant has met the conditions for participation in the public tender.

E.3 Issue of the decision on the selection of bidders

Based on a report from the tender commission, the Agency shall issue each individual applicant that meets all the conditions of the public tender a decision on the selection of a bidder, indicating therein the time, place, and manner of holding the public auction.

Each individual applicant that does not meet one or more of the conditions for the public tender shall receive a decision that it was not selected as a bidder, with an explanation thereto. Applicants that are not selected as bidders shall still be subject to the provisions of confidentiality, until the issue of the written decision from paragraph 6 of Article 45 of ZEKom-1, which shall be issued to successful bidders at the end of the auction.

The Agency shall inform each applicant as to its decision on the fulfilment of conditions of the public tender individually, but shall not reveal to them the identity of other selected bidders or the identity of the applicants



that were not selected as bidders, nor shall it reveal to the public the number or identity of applicants or bidders.

The Agency shall also publish the time and place for holding the public auction on its website and in the Official Gazette of the Republic of Slovenia.

F Auction rules for Electronic Auction

F.1 Reserve price and payment method

The Agency determined the lowest prices for lots in lot categories with the approval of the Government of the Republic of Slovenia, which was given in the resolution no. xxxxxx of dd. mm. 2020. In this resolution, the Government of the Republic of Slovenia approved the lowest fee for the efficient use of a limited natural resource, and the payment method. Based on this, the lowest fees for the efficient use of a limited natural resource (reserve prices) for lots in lot categories shall be as follows:

Table F-1: Reserve prices in EUR for each lot

Lot name	Reserve price for the lot
A	[N/A]
B	[N/A]
C1	[N/A]
C2	[N/A]
D	[N/A]
E	[N/A]
F	[N/A]
G	[N/A]

Source: AKOS

In accordance with the cited resolution of the Government of the Republic of Slovenia, the bidders who shall be awarded radio-frequencies from this public tender with an ODRF issued by the Agency, must pay the price for the efficient use of a limited natural resource as a lump sum, within 15 days of receiving the written decision from Par. 6 Art. 45 of ZEKom-1.

Winning bidders shall be issued written decisions with information about the frequency blocks awarded to them in the public auction, the location of these blocks within frequency bands, the fee for the efficient use of a limited natural resource, and any potential additional payments required to cover the difference between the fee for efficient use of a limited natural resource and the deposits that the bidders had to pay during the auction.

F.1.1 Reduction of annual fees for the use of radio frequencies

When preparing the General legal act on the method for calculating fees for radio frequency usage (Official Gazette of the RS, no. 30/13, 33/13 – corr., 40/13 – corr., 81/14, 21/16, 63/16 and 64/19), the Agency took into account the cost of building networks, and added Par. 8. Art. 12 to the act with the purpose of promoting investments, setting the factor 0.3 for the first year of using the assigned frequencies for providing public communication services to end user, factor 0.5 for the second year, and factor 0.7 for the third year.

Furthermore, due to the occupancy of the 700 MHz band in the neighbouring countries, Par. 7 of Art. 12 stipulates the factor of 0.3 to be multiplied with the number of points for the period between 1 July 2020 and 31 December 2021 for this band.

Use of factors from Par. 7 and 8 Art. 12 of this general act is mutually exclusive.

F.2 Auction rules

F.2.1 General

The subject of the public auction are individual lots (auction units for blocks). The definitions are presented in a glossary below:

Table F-2: Glossary

Term	Belongs to	Definition
Activity	Quantity of lots in one or more Lot Categories	A weighted measure to express demand across Lot Categories as a single number; the sum of Lot Ratings across Lot Categories multiplied by the quantity of lots demanded in that Lot Category
Allocation Stage		First Stage of the Auction, in which generic lots will be auctioned
Allowable Change	Bid	A number, which reflects the extent to which demand changes can be accepted
Initial Bid	Bidder	Part of the application to participate in the auction which specifies the number of lots in each Lot Category that a bidder is willing to buy at its Reserve Price
Assignment Stage		Second and last stage of the auction, in which winners of generic lots can place additional bids to be assigned specific blocks, where necessary
Assignment Prices	Band, bidder	Additional price a bidder has to pay for receiving a specific assignment in a band
Base Price	Lot Category	The price that winning bidders will have to pay for their allocated lots (typically the Resulting Price of the final round)
Bid	Round, bidder, Lot Category	A bid consists of a price, a change in demand, and in some cases an election of either Exit or Switch
Eligibility	Round, bidder	A bidder's eligibility limits the demand a bidder can express in a round
Excess Demand	Round, Lot Category	The sum across all bidders of the number of lots associated with the bids in that Lot Category, minus the supply for the Lot Category
Exit Bid		A characteristic of a bid to reduce demand; an Exit Bid, when applied during bid processing, reduces the bidder's eligibility for the current round
Final Price	Bidder	Price which bidders must ultimately pay, i.e. the sum of the

		Base Prices for each lot allocated to the bidder in the Allocation Stage and the Assignment Prices
Lot Category		Categorisation of the generic lots
Lot Rating	Lot Category	Valuation of each Lot Category which matters for Activity and Eligibility
Main Auction		The auction in the Allocation Stage that is intended to establish each bidder's allocation of lots in each Lot Category
Price Range Percentage	Bid	Represents where in the range between the Start Price and the End Price a bid's price falls
Remaining Change	Bid	During bid processing, a change in demand requested by the bidder that has not yet been applied, which is a positive number for a bid to increase and a negative number for a bid to decrease
Resale Auction		Auction for some or all of the Lot Categories in which there are unsold lots after the conclusion of the Main Auction, and after possible elections to decline allocations have been made; will be held at AKOS' discretion
Resulting Price	Round, Lot Category	The Price for a Lot Category determined during bid processing, which will become either the Start Price for the next round or the Base Price (if the auction has concluded)
Resulting Quantity	Round, bidder, Lot Category	During bid processing, the number of lots that a bidder is allocated in a Lot Category; after bid processing, the number of lots the bidder would win in the Lot Category if the auction ends
Set-Aside Bidders		Bidders who only hold spectrum licenses that expire in September 2021 as of the application date
Spectrum Caps	A set of bands	A limitation on the amount of spectrum each bidder can hold after the Allocation Stage, set by AKOS
Start Price & End Price	Round, Lot Category	Announced before each round for each Lot Category
Start Quantity	Round, bidder, Lot Category	The starting point for a bidder's demand for a Lot Category in a round; a bid specifies a bidder's change in demand relative to the Start Quantity
Switch Bid		During bid processing, a Switch Bid does not affect the Eligibility in the current round

Source: Copenhagen Economics, AKOS

F.2.2 AVAILABLE LOTS

F.2.2.1 Lot Categories

1. The auction process consists of two stages: 1) an Allocation Stage, in which generic lots will be auctioned that are organised into eight Lot Categories, see Table F-3, and 2) an Assignment Stage in

which winners of generic lots can place additional bids to be assigned specific blocks, where necessary.

Table F-3: Overview of Lot Categories

LOT CATEGORY	FREQUENCY BAND	RANGE	SUPPLY	SPECTRUM ENDOWMENT PER LOT	LOT RATING
A	700 MHz FDD	703-733 MHz & 758-788 MHz	6	2x5 MHz	6
B	700 MHz SDL	738-753 MHz	1	1x10 MHz + 1x5 MHz (impaired) *	1
C1	1400/1500 MHz	1452-1492 MHz (with option to convert to C2)	4	1x10 MHz	1
C2		1432-1512 MHz	4	1x10 MHz	1
D	2100 MHz	1920-1980 MHz & 2110-2170 MHz	12	2x5 MHz	4
E	2300 MHz	2320-2390 MHz	7	1x10 MHz	2
F	3600 MHz	3420-3800 MHz	38	1x10 MHz	2
G	26 GHz	26.5-27.5 GHz	5	1x200 MHz	(no switching)

Note: * The single lot in Lot Category B is associated with 1x10 MHz in the range 743-753 MHz and 1x5 MHz in the range 738-743 MHz, which is associated with interference issues.

Source: Copenhagen Economics, AKOS

F.2.2.2 Switching between Lot Categories with special provision for Lot Category

G

2. During the Main Auction, in the Allocation Stage, bidders will be able to switch their demand between Lot Categories A-F subject to an Activity Rule, based on the specified Lot Ratings, as further described in Section F.2.6.1.
3. No switching will be permitted to or from Lot Category G; it therefore does not have a Lot Rating.

F.2.2.3 Special provisions for the 1500 MHz band

4. The 1400/1500 MHz band is divided into two parts, the “Core” (i.e. 1452-1492 MHz) and the “Extensions” (i.e. 1432-1452 MHz and 1492-1512 MHz).

For lots allocated to a bidder in C2, specific blocks may be assigned in either the Core or the Extensions. Lots allocated in C1 will be assigned in the Core part of the band, unless the bidder elects to have their allocation of C1 lots be treated as C2 lots, for the purposes of the Assignment Stage. Such an election does not affect the bidder’s Base Prices for the lots allocated in the Assignment Stage.

5. The 1x5 MHz blocks that are adjacent to the lower and upper end of the frequency range of the 1400/1500 MHz band are subject to interference issues. These blocks will therefore not be offered as part of the Allocation Stage. Instead, following the conclusion of the Assignment Stage:
 - the 1427-1432 MHz block will be allocated to the winner of the 1432-1442 MHz lot, and
 - the 1512-1517 MHz block will be allocated to the winner of the 1502-1512 MHz lot.

F.2.2.4 Spectrum Caps in the Allocation Stage

6. To ensure competition, AKOS imposes the following Spectrum Caps on the amount of spectrum each bidder can hold after the Allocation Stage:
 - A Spectrum Cap of 2x35 MHz on all FDD spectrum holdings below 1 GHz designated for mobile communications, covering the sum of:
 - Spectrum allocations in Lot Category A
 - Current 800 MHz holdings, as of the application date
 - Current 900 MHz holdings, as of the application date
 - A Spectrum Cap of 190 MHz on total spectrum allocations in Lot Categories E and F.
 - A Spectrum Cap of 800 MHz on spectrum allocation in Lot Category G.
 - A Spectrum Cap of 425 MHz on “prime spectrum bands”, covering the sum of:
 - Spectrum allocations in Lot Category A, D, E and F
 - Current 800 MHz holdings, as of the application date
 - Current 900 MHz holdings, as of the application date
 - Current 1800 MHz holdings, as of the application date
 - Current 2600 MHz holdings (including both FDD and TDD holdings), as of the application date
7. The detailed auction rules below are designed to prevent outcomes where a bidder’s allocation exceeds one or more of the Spectrum Caps.

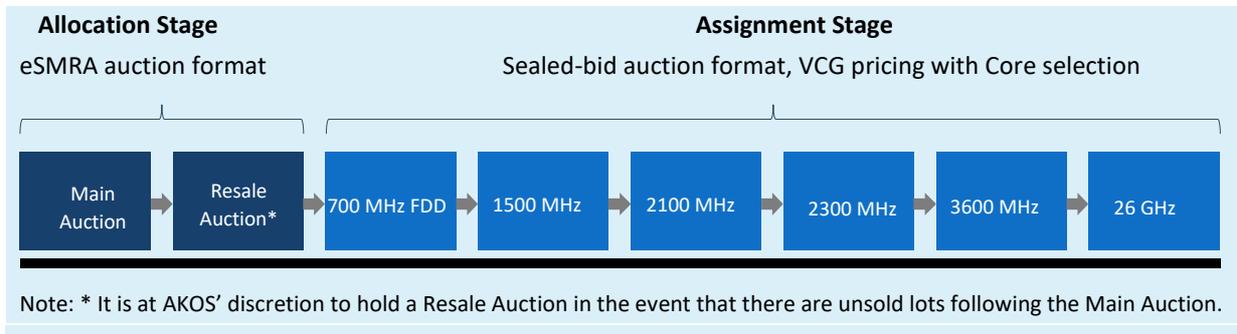
F.2.2.5 Set-aside pricing in Lot Category D (2100 MHz)

8. Any bidder that, at the application date, only holds spectrum licenses that expire in September 2021, will be eligible for a different pricing mechanism for up to 2 lots in Lot Category D, see Section F.2.6.6.1 (paragraph 77 to 79) for further details.

F.2.3 AUCTION PROCESS

9. The auction process consists of two stages: 1) an Allocation Stage and 2) an Assignment Stage, see Figure 1.

Figure F-1: Overview of the auction process



Source: Copenhagen Economics, AKOS

10. The Allocation Stage determines the number of lots awarded to each bidder in each Lot Category, and the Base Prices that winning bidders will have to pay for these lots.
11. The Allocation Stage consists of a Main Auction and, in case there are any unsold lots following the conclusion of the Main Auction, potentially a Resale Auction, at AKOS' discretion.
12. The Assignment Stage determines the specific frequency blocks that will be assigned to bidders who were allocated frequency-generic lots, and any additional payments each bidder has to pay to receive its assignment.
13. The Assignment Stage consists of one bidding round for each band, held in ascending frequency order, i.e. in the order from left to right as illustrated in Figure F-1. Assignment rounds for bands in which there is only one possible assignment, for example 700 MHz SDL, will not be held.

F.2.4 General provisions

14. All auctions will be held using the auction system made available by AKOS. Each bidder will receive access credentials for the system and short instructions on how to use it.
15. Each bidder will also have the opportunity to take part in a workshop on the essentials of the auction design and to participate in a private mock auction.
16. In each of the two stages, the auctions will proceed in a series of rounds. A round consists of a bid submission phase followed by a results phase. During the bid submission phase of a round, bidders can enter and modify their bids as many times as they like. Bidders will be able to see the bids that they have in place in the auction system. The bids that were in place at the time the bid submission phase ends will be the binding bids for the round. All bids are expressed as an integer number of EUR.

F.2.4.1 Final prices

17. The final price which bidders must ultimately pay is the sum of:
 - a. the Base Prices for each lot allocated to the bidder in the Allocation Stage and
 - b. the Bidder's Assignment Prices in each round in the Assignment Stage

F.2.4.2 Auction schedule

18. Allocation Stage auction rounds (both Main Auction and Resale Auction) are scheduled at AKOS' discretion. No minimum or maximum length for auction rounds is set in advance. However, AKOS does not anticipate running auction rounds shorter than 15 minutes or longer than 2 hours. The time between rounds is discretionary and may be varied by AKOS.
19. All rounds in the Allocation Stage will be scheduled between 8.30 and 18.00 hours on Slovenian business days.
20. There is no upper bound on the number of rounds per day. However, AKOS does not anticipate running more than 8 rounds in a single day.
21. Bidders will be notified of the start time for a round at least 15 minutes before the scheduled round start.
22. AKOS may, at its discretion, publish details of its anticipated round schedule for the following day in advance. However, such a round schedule is provisional and for information purposes only. AKOS shall not be bound by the provisional round schedule and will retain the right to schedule rounds at its discretion.
23. The start time and duration of the first assignment round will be announced by AKOS after the completion of the Allocation Stage. There will be at least one full business day between the end of the Allocation Stage and the start of the Assignment Stage.
24. AKOS has discretion over the time and duration of each of the assignment rounds in the Assignment Stage. However, AKOS anticipates that several assignment rounds may be completed, in sequence, on a single day.
25. All assignment rounds in the Assignment Stage will be scheduled between 8.30 and 18.00 hours on Slovenian business days.

F.2.5 Before the auction

26. Details of the application process and necessary documentation are set out in Section C (The preparation of the tender application) and Form I.6 of the Tender Documentation.

F.2.5.1 Initial Bid

27. As part of its application, each bidder submits an Initial Bid, according to Form I.6, which specifies the number of lots in each Lot Category at its Reserve Price. The Aggregate Demand for lots in each Lot Category is the sum of the Initial Bids across all bidders in each Lot Category.
28. If for none of the Lot Categories, Aggregate Demand exceeds supply, AKOS will notify bidders that the Main Auction will not need to be held.
29. If there is excess demand for at least one of the Lot Categories A-F, all Lot Categories A-F will be offered in the Main Auction. This is to allow for switching.

30. If Aggregate Demand does not exceed supply for Lot Category G, Lot Category G will not be offered in the Main Auction.
31. If Aggregate Demand exceeds supply for Lot Category G but for none of the other Lot Categories, then only Lot Category G will be offered in the Main Auction.
32. If due to insufficient Aggregate Demand, the Main Auction is not held, or if not all Lot Categories are offered in the Main Auction, then for each Lot Category not offered in the Main Auction, bidders will be allocated the number of lots they indicated in their Initial Bid at the Reserve Price.

F.2.5.2 Minimum Viable Quantity for the Main Auction

33. For the purposes of the Main Auction only, as part of its application, each bidder has the option to specify a Minimum Viable Quantity from a menu of available options in each of the Lot Categories A, C1, C2, D, E and F, see Table F-4. The Minimum Viable Quantity determines the level below which a bidder would not be interested in winning lots. In the Main Auction, a bidder who specified a Minimum Viable Quantity will be guaranteed to be allocated, in that Lot Category, either nothing or at least their Minimum Viable Quantity.
34. For bands in which a bidder cannot or does not wish to specify a Minimum Viable Quantity, the Minimum Viable Quantity for the band will be presumed to be 1.

Table F-4: Possible specifications of Minimum Viable Quantity in each Lot Category

LOT CATEGORY	FREQUENCY BAND	SPECTRUM ENDOWMENT PER LOT	SUPPLY	MENU OF "MINIMUM VIABLE QUANTITY" OPTIONS
A	700 MHz FDD	2x5 MHz	6	1 or 2
B	700 MHz SDL	1x10 MHz + 1x5 MHz	1	(1)
C1	1500 MHz	1x10 MHz	4	1 or 2
C2		1x10 MHz	4	1 or 2
D	2100 MHz	2x5 MHz	12	1 or 2
E	2300 MHz	1x10 MHz	7	1, 2, 3, or 4
F	3600 MHz	1x10 MHz	38	1, 2, 3, 4, 5, 6, 7, or 8
G	26 GHz	1x200 MHz	5	(1)

Note: Bidders can choose their Minimum Viable Quantity of lots per Lot Category from the menu specified in the last column of the table.

Source: Copenhagen Economics, AKOS

Box 1 Example for specification of Minimum Viable Quantity

For example, consider that a bidder is not interested in an assignment of just 2x5 MHz in Lot Category A but only deems an assignment of at least 2x10 MHz in this Lot Category to be useful. In that case, this bidder could decide to specify a Minimum Viable Quantity of 2 lots in its application.

Thereby, the bidder is guaranteed to be allocated, in the Main Auction, either at least 2 lots in this Lot Category, or none. In other words, it cannot occur that a requested demand reduction by this bidder from 2 to zero lots is only partially granted such that the bidder ends up with only 1 lot. Similarly, it cannot occur that a bid to increase demand from 0 to 2 is only partially granted.

F.2.6 Allocation stage

35. The Main Auction and potential Resale Auction of the Allocation Stage will follow the eSMRA format, which consists of one or more rounds. The number of rounds will depend on the bids received in the auction.

F.2.6.1 Activity Rule and Eligibility

36. During the course of the auction, prices for Lot Categories will generally increase, and will never decrease. Correspondingly, a bidders' general level of demand across Lot Categories may not increase from round to round.
37. A bidder's general level of demand is more precisely expressed as a single number which is referred to as the bidder's **Activity**. Each Lot Category is associated with a Lot Rating except for Lot Category G, as listed in Table F-3 in Section F.2.2.1. The Activity of a possible allocation of lots is measured in points, by multiplying the number of lots in each Lot Category by the Lot Rating in each Lot Category, and summing across Lot Categories A-F.
38. At the beginning of each round, the auction system informs each bidder of its **Eligibility** for the round, which is also expressed as a number. In each round, a bidder's Eligibility is equal to the Activity associated with the bidder's Start Quantities in that round. In round 1 of the Main Auction, the initial Eligibility of a bidder is the Activity associated with the bidder's Initial Bid.
39. The Activity Rules for the auction are that:
 - a. bidder's demand cannot, following any round, result in an Activity which exceeds the bidder's Eligibility entering that round.
 - b. bidder may not increase its demand in Lot Category G

F.2.6.2 Before round 1

40. Before the first auction round, each bidder will see, for each Lot Category, its initial demand, (for the Main Auction, this is its Initial Bid), and its Minimum Viable Quantity.
41. Bidders are required to report any discrepancies between the information displayed and the preferences they expressed in their application (Form I.6) at least 30 minutes before the start of the first round to the auction manager.

F.2.6.3 Bidding process in each round

42. Before each round, AKOS informs all bidders of the **Start Price** and **End Price** for each Lot Category.
43. Each bidder is also privately informed of its **Start Quantity** for each Lot Category and its Eligibility for the round.
44. In Round 1, a bidder's Start Quantity for a Lot Category is its initial demand for that Lot Category. In subsequent rounds, a bidder's Start Quantity is determined based on the results of the previous round, as described in Section F.2.6.4.
45. During the bid submission period, each bidder can choose for each Lot Category, whether it wishes to maintain its demand at the level of its Start Quantity for all prices in the round up to the End Price of the round or whether it wishes to place a bid to modify its demand.
46. A bid for a Lot Category includes a price and a number indicating the change in demand that the bidder would like to make at that price. The price must be no less than the Start Price and no more than the End Price for the round and Lot Category, and the demand after the change may not be negative and may not exceed the supply for the Lot Category.
47. For a bid in a Lot Category other than Lot Category G, the change in demand may be a positive number (to indicate an increase in demand) or a negative number (to indicate a decrease). In the case of a decrease, the bidder must also specify whether the bid is a **Switch Bid** or an **Exit Bid**.
48. For a bid in Lot Category G, bids to increase demand are not permitted, and the change in demand must be a negative number. The distinction between Switch Bids and Exit Bids does not apply in Lot Category G and therefore bidders cannot specify whether a bid is a Switch Bid or an Exit Bid.
49. The procedure described in Section F.2.6.5 determines whether or not and to what extent the demand change requested in a bid is actually applied. The auction system may prevent a bidder from placing a bid if, at the time the bid is placed, it can already pre-determine that it will not be possible to apply the bid, for example because it would violate the Activity Rule or a Spectrum Cap.
50. If a bidder does not place a bid for a Lot Category, or explicitly chooses to maintain its demand at the Start Quantity, its demand at all prices between (and including) the Start Price and the End Price of the round is equal to its Start Quantity for the round.
51. If a bidder places a bid to change its demand for a Lot Category, its demand at prices less than the bid price is its Start Quantity, and at prices greater than its bid price, the sum of its Start Quantity and the requested change in demand.

Box 2 Demand implied by a bid

For example, suppose in an auction round, the Start Price for a Lot Category is EUR 15,000,000 and the End Price is EUR 17,000,000. Further suppose a bidder's Start Quantity in the Lot Category is 5, and that the bidder has decided that, if the price exceeds EUR 16,000,000, it is no longer willing to buy 5 lots, but would still be willing to buy 2 lots at prices up to and including EUR 17,000,000.

The bidder would place a bid to decrease its demand by 3 at a price of EUR 16,000,000. The change in demand is -3 (i.e. a negative number, because it is a decrease bid), and therefore the bidder's demand at prices greater than EUR 16,000,000 would be $5 + (-3) = 2$.

52. After each round in the auction, if the auction ends, each bidder will be allocated, the number of lots indicated by its demand at the Resulting Price determined in the auction pursuant to Section F.2.6.6. If the bidder placed a bid to change its demand at exactly this price, the bidder may be allocated the number of lots indicated by its demand at the Start Price, its demand at the End Price, or any number of lots in between that is at least its Minimum Viable Quantity.

Box 3 Demand implied by a bid

For example, suppose during the auction, that a bidder enters a bid to reduce demand at EUR 20,000,000 by 2 lots to 0 lot.

If the Resulting Price is exactly EUR 20,000,000, the bidder might be allocated any of the following:

- 2 lots (its Start Quantity)
- 0 lots (its demand at the end of the round, calculated as $2 + (-2)$) • 1 lot (a number in between)

Suppose the bidder had specified before the auction a Minimum Viable Quantity of 2 lots for this Lot Category, then the bidder would not be allocated 1 lot, since that would be less than its Minimum Viable Quantity. Instead, the bidder might be allocated either 2 lots or 0 lots.

53. For the avoidance of doubt, in no case will a bidder be obligated to buy fewer lots in a Lot Category than its Minimum Viable Quantity. Further, in no case will a bidder be allocated more lots than its demand at the Resulting Price.

F.2.6.4 Determination of Round Results

54. After the bid submission phase has concluded, the auction system will determine the result of the round. The result comprises for each Lot Category its **Resulting Price** and for each bidder its **Resulting Quantity** for each Lot Category.
55. If the auction ends after the round, each bidder is allocated its Resulting Quantity with a Base Price equal to the Resulting Price per lot. Otherwise, for the next round, the Start Price will be set to the Resulting Price, and each bidder's Start Quantity will be set to the Bidder's Resulting Quantity.

56. Excess Demand for a Lot Category is defined as the sum across all bidders of the number of lots associated with the bids in that Lot Category, minus the supply for the Lot Category.

F.2.6.5 Bid processing Algorithm

57. To determine the Resulting Quantities for each Bidder and Lot Category, the auction system automatically runs the following bid processing algorithm:
58. For each bidder and Lot Category, the Resulting Quantity is initially set to the bidder's Start Quantity for the Lot Category.
59. For each bid, the auction system calculates the bid's Price Range Percentage, which indicates where in the range between the Start Price (0%) and the End Price (100%) for the bid's Lot Category the bid price falls. More precisely, the Price Range Percentage is calculated as follows:

$$\text{Price Range Percentage} = \frac{\text{Bid Price} - \text{Start Price}}{\text{End Price} - \text{Start Price}} * 100 \%$$

60. The auction system then creates one list of all bids submitted, in order of Price Range Percentage. The ordering of a set of bids with identical Price Range Percentage will be determined randomly.
61. For each bid, the system will keep track of its **Remaining Change**, which is initially set to the change in demand requested by the bidder and therefore a positive number of a bid to increase and a negative number for a bid to decrease.
62. The bids in the list are then processed in order of increasing price range percentage, usually in multiple passes.
63. In general terms, a request to increase demand can be accepted if it does not result in a violation of the Activity Rule and does not cause the bidder to exceed any of its Spectrum Caps. A request to decrease demand will be accepted if it does not cause the aggregate demand for the Lot Category to fall below the supply. Additional rules apply, and the process is specified more precisely in paragraphs 64 to 72 below.
64. When processing a bid, the system first determines the **Allowable Change** for a bid.
65. For a bid to increase demand, the Allowable Change is the minimum of the absolute value of the Remaining Change and the absolute difference between:
- a. the maximum demand which would not result in a violation of an Activity Rule and which does not cause the bidder to exceed any of its Spectrum Caps and
 - b. the bidder's current Resulting Quantity
66. For a bid to decrease demand, the Allowable Change is the minimum of (a) the absolute value of the Remaining Change and (b) the Excess Demand in the Lot Category, based on each bidder's Resulting Quantity
67. If the thus determined allowable change is zero, the bid is marked as **rejected**.

68. Otherwise, the bid is processed differently depending on whether it is a bid to increase demand or a bid to decrease demand.
69. For a bid to decrease demand, if the Allowable Change exceeds the difference between the bidder's current Resulting Quantity and its Minimum Viable Quantity, the bidder's Resulting Quantity is set to zero lots and the bid is removed from the list. Otherwise, the bidder's current Resulting Quantity is reduced by the Allowable Change, and bid's Remaining Change (a negative number) is increased by the Allowable Change. If the bid was an Exit Bid, the bidder's Eligibility is reduced by the Lot Ratings of the lots associated with the change of the Resulting Quantity that was applied.

Box 4 Allowable Change – an example

Suppose a bidder enters a bid to reduce demand at EUR 20,000,000 by 7 lots, to 0 lots.

The result of applying the auction rules is the following:

- if Excess Demand is 7 or greater, the bid can be applied in full; the Allowable Change is 7 and the bidder's Resulting Quantity will be 0.
- if Excess Demand is 6 or less, then the Allowable Change is equal to the Excess Demand; after applying this decrease, there is no more Excess Demand. The bidder's Resulting Quantity will be $7 - (\text{Excess Demand})$. The unapplied remainder of the bid stays in the list for the time being and might be applied later, if another bidder's bid to increase demand is applied.

In this example, the "Allowable Change" would be the largest number that is not greater than 7 (because the decrease in the bid was 7) and not greater than the Excess Demand.

Now suppose the bidder's Minimum Viable Quantity is 3 lots for this Lot Category.

Applying paragraph 69, the difference between the bidder's current Resulting Quantity (7) and its Minimum Viable Quantity (3) is equal to $7-3=4$. If the Excess Demand does not exceed this number, the result is the same as above. However, if the Excess Demand is 5 or greater, then "the bidder's Resulting Quantity is set to zero lots and the bid is removed from the list". This way, the bidder's Minimum Viable Quantity of 3 is respected; if the bidder could only receive $7-5=2$ lots or $7-6=1$ lot, the bidder should receive nothing.

70. For a bid to increase demand, if the bidder's current Resulting Quantity is zero and the Allowable Change is less than its Minimum Viable Quantity, the bid is marked as **rejected**. Otherwise, the bidder's Resulting Quantity is increased by the Allowable Change and the bid's Remaining Change is decreased by the Allowable Change.
71. After a bid was processed:
- a. If the bid's Remaining Change is zero, it is removed from the list.
 - b. If the bid was marked as rejected, it stays in the list unchanged, and the system proceeds by processing the next bid in the list. If there is no such bid, i.e., all bids in the list were rejected, bid processing for this round has concluded.
72. If the bid was not marked as rejected, the system now restarts bid processing from the beginning of the list.

F.2.6.6 Determining Resulting Prices for each Lot Category

73. After bid processing for a round has concluded, the Resulting Price for each Lot Category is determined as follows:
- If the sum of the Resulting Quantities for the Lot Category exceeds the Supply for the Lot Category, i.e. there is still Excess Demand, the Resulting Price is set to the End Price of the Lot Category.
 - Otherwise, the Resulting Price is set to the highest price at which there was a bid to reduce demand that resulted in a demand reduction for its bidder.
74. If the sum of the Resulting Quantities does not exceed the Supply for any of the Lot Categories, i.e. there is no Excess Demand, the auction concludes.
75. Otherwise, the auction continues for another round.
76. The next round's Start Price for each Lot Category will be equal to the Resulting Price for that Lot Category, and the End Price will be set to a price that is between 1% and 25% higher, at AKOS' discretion.

Box 5 Example for demand changes with one Lot Category

Consider as an example a Lot Category X which has the following conditions in an auction round.

LOT CATEGORY	LOT RATING	DEMAND	SUPPLY	START PRICE	END PRICE
X	1	8 lots	6 lots	1m	1.1m

Suppose two bidders A and B have placed the following bids in this Lot Category X.

LOT CATEGORY	MINIMUM VIABLE QUANTITY	CURRENT RESULTING QUANTITY	REQUESTED DEMAND CHANGE	TYPE OF BID	BID PRICE
BIDDER A					
X	1	4	-2	Exit Bid	1.075m
BIDDER B					
X	1	4	-1	Exit Bid	1.05m

Based on the bids, the auction system **lists the bids in ascending order of Price Range Percentage** in the following way:

1. B's bid to decrease by 1, at a price of 1.05m (Price Range Percentage 50%).
2. A's bid to decrease by 2, at a price of 1.075m (Price Range Percentage 75%)

Based on the list, Bidder B's bid is processed first.

The auction system **calculates the Allowable Change for B's bid**, which is 1, i.e. the minimum of the absolute value of the requested demand change (i.e. 1) and Excess Demand (i.e. 2). Since the Remaining Change does not exceed the Allowable Change, Bidder B's demand reduction is **accepted in full**, which leaves demand at 7 lots, i.e. $8+(-1)$. The bid is removed from the list.

Because the bid was applied, the auction system now restarts processing at the beginning of the list. The first (and only) bid in the list is A's bid.

The system **calculates the Allowable Change for A's bid**, which is 1, i.e. the minimum of the absolute value of the requested demand change (i.e. 2) and Excess Demand (i.e. 1). Since the Remaining Change exceeds the Allowable Change, Bidder A's demand change is only **partially accepted**, i.e. a reduction by 1 lot is applied because this leaves supply equal to demand.

The resulting **price is 1.075m** (Bidder A's bid price) because this is the highest price at which a reduction was applied.

Box 6 Example for demand changes with two lot categories

Consider two Lot Categories X and Y, which have the following conditions in an auction round.

LOT CATEGORY	LOT RATING	DEMAND	SUPPLY	START PRICE	END PRICE
X	1	8 lots	6 lots	1m	1.1m
Y	1	5 lots	4 lots	1.2m	1.3m

CASE A

Suppose two bidders A and B have placed the following bids in Lot Categories X and Y.

LOT CATEGORY	MINIMUM VIABLE QUANTITY	CURRENT RESULTING QUANTITY	REQUESTED DEMAND CHANGE	TYPE OF BID	BID PRICE
BIDDER A					
X	1	4	-2	Exit Bid	1.075m
Y	1	2	0	--	
BIDDER B					
X	<u>1</u>	<u>4</u>	-1	Switch Bid	1.05m
Y	1	3	1	--	1.22m

Based on the bids, the auction system **lists the bids** in the following way:

1. B's bid to increase by 1 in Y, at a price of 1.22m (20% Price Range Percentage)
2. B's bid to decrease by 1 in X, at a price of 1.05m (50% Price Range Percentage)
3. A's bid to decrease by 2 in X, at a price of 1.075m (75% Price Range Percentage)

Based on the list, **Bidder B's bid to increase in Y** is processed first. The auction system **rejects** Bidder B's requested demand increase because it breaches the Activity Rule.

Then, the auction system processes **Bidder B's bid to decrease in X**. The system calculates the Allowable Change, which is 1 and Bidder B's demand reduction is **accepted**. Since this bid is accepted, it is removed from the list.

Now, the auction system starts again at the beginning of the list and once again processes **Bidder B's bid to increase in Y**. This demand increase does not breach the Activity Rule anymore because B's accepted

demand reduction in Lot Category X freed up eligibility for a demand increase in Y. Bidder B's demand increase is **accepted**. As this bid is accepted, it is removed from the list.

Again, the auction system starts at the beginning of the list, which now only contains **Bidder A's bid to decrease in X**. The system calculates the Allowable Change, which is 1 and Bidder A's demand reduction is only **partially accepted**, i.e. a reduction by 1 lot is applied.

To summarise, Bidder B **can switch 1 lot from X to Y** but Bidder A's bid to decrease is only accepted for 1 but not 2 lots.

CASE B

Suppose two bidders A and B have placed the following bids in Lot Categories X and Y, which do not breach any Spectrum Caps. (Note, the bid prices in Lot Category X are reversed between Bidder A and B in this example compared to Case A.)

LOT CATEGORY	MINIMUM VIABLE QUANTITY	CURRENT RESULTING QUANTITY	REQUESTED DEMAND CHANGE	TYPE OF BID	BID PRICE
BIDDER A					
X	1	4	-2	Exit Bid	1.05m
Y	1	2	0	--	
BIDDER B					
X	1	4	-1	Switch Bid	1.075m
Y	1	3	1	--	1.22m

Based on the bids, the auction system **lists the bids** in the following way:

1. B's bid to increase by 1 in Y, at a price of 1.22m (20% Price Range Percentage)
2. A's bid to decrease by 2 in X, at a price of 1.05m (50% Price Range Percentage)
3. B's bid to decrease by 1 in X, at a price of 1.075m (75% Price Range Percentage)

Based on the list, **Bidder B's bid to increase in Y** is processed first and **rejected** because it breaches the Activity Rule.

Then, the auction system processes **Bidder A's bid to decrease in X**. The system calculates the Allowable Change, which is 2, i.e. the minimum of the absolute value of the requested demand change (i.e. 2) and Excess Demand (i.e. 2). Since the Remaining Change does not exceed the Allowable Change, Bidder A's demand reduction is **accepted in full**, which results in no Excess Demand in Lot Category X. Since this bid is accepted, it is removed from the list.

Now, the auction system starts again at the beginning of the list. Once again **Bidder B's bid to increase in Y** is processed and **rejected** because it breaches the Activity Rule.

Then, the auction system processes **Bidder B's bid to decrease in X**. The system calculates the Allowable Change, which is 0, i.e. the minimum of the absolute value of the requested demand change (i.e. 1) and the Excess Demand (i.e. 0). Since the Remaining Change exceeds the Allowable Change, Bidder B's demand reduction is **rejected**.

To summarise, **Bidder B cannot switch 1 lot from X to Y** but Bidder A's bid to decrease by 2 in X is accepted in full.

Box 7 Example for demand changes with three lot categories

Consider three Lot Categories X, Y and Z, which have the following conditions in an auction round.

LOT CATEGORY	LOT RATING	DEMAND	SUPPLY	START PRICE	END PRICE
X	1	8 lots	6 lots	1m	1.1m
Y	1	5 lots	4 lots	1.2m	1.3m
Z	1	3 lots	2 lots	1.2m	1.3m

CASE A

Suppose two bidders A and B have placed the following bids in Lot Categories X, Y and Z, which do not breach any Spectrum Caps.

LOT CATEGORY	MINIMUM VIABLE QUANTITY	CURRENT RESULTING QUANTITY	REQUESTED DEMAND CHANGE	TYPE OF BID	BID PRICE
BIDDER A					
X	1	4	-2	Exit Bid	1.075m
Y	1	2	0	--	
Z	1	0	0	--	
BIDDER B					
X	<u>1</u>	<u>4</u>	-1	Switch Bid	1.05m
Y	<u>1</u>	<u>3</u>	1	--	1.22m
Z	1	3	-1	Exit Bid	1.23m

Based on the bids, the auction system **lists the bids** in the following way:

1. B's bid to increase by 1 in Y, at a price of 1.22m (20% Price Range Percentage)
2. B's bid to decrease by 1 in Z, at a price of 1.23m (30% Price Range Percentage)
3. B's bid to decrease by 1 in X, at a price of 1.05m (50% Price Range Percentage)
4. A's bid to decrease by 2 in X, at a price of 1.075m (75% Price Range Percentage)

Based on the list, **Bidder B's bid to increase in Y** is processed first and **rejected** because it breaches the Activity Rule. Then, the auction system processes **Bidder B's bid to decrease in Z**, which is **accepted**. Since this bid is accepted, it is removed from the list.

The auction system starts again at the beginning of the list. Once again **Bidder B's bid to increase in Y** is processed and **rejected** because it breaches the Activity Rule. Note the acceptance of the decrease in Z (set as Exit Bid) does not free up eligibility for Bidder B to increase demand in Y. Next, **Bidder B's bid to decrease in X** is processed and **accepted**. Since this bid is accepted, it is removed from the list.

The auction system starts again at the beginning of the list. Once again **Bidder B's bid to increase in Y** is processed and now **accepted** because the acceptance of the decrease in X (set as Switch Bid) frees up eligibility for Bidder B to increase demand in Y.

Since this bid is accepted, it is removed from the list.

The auction system starts at the beginning of the list, which now only contains A's bid to decrease by 2 in X, which is only **partially accepted**.

To summarise, Bidder B can reduce demand in Lot Category Z (set as Exit Bid), which does not allow B to increase its demand. However, **Bidder B can switch 1 lot from X to Y**, because B's demand reduction in X freed up eligibility. Bidder A's bid to decrease by 2 in X is only partially accepted.

CASE B

Suppose two bidders A and B have placed the following bids in Lot Categories X, Y and Z, which do not breach any Spectrum Caps. (Note, the bid prices in Lot Category X are reversed between Bidder A and B in this example compared to Case A.)

LOT CATEGORY	MINIMUM VIABLE QUANTITY	CURRENT RESULTING QUANTITY	REQUESTED DEMAND CHANGE	TYPE OF BID	BID PRICE
BIDDER A					
X	1	4	-2	Exit Bid	1.05m
Y	1	2	0	--	
Z	1	0	0	--	
BIDDER B					
X	1	4	-1	Switch Bid	1.075m
Y	1	3	1	--	1.22m
Z	1	3	-1	Exit Bid	1.23m

Based on the bids, the auction system **lists the bids** in the following way:

B's bid to increase by 1 in Y, at a price of 1.22m (20% Price Range Percentage)

1. B's bid to decrease by 1 in Z, at a price of 1.23m (30% Price Range Percentage)
2. A's bid to decrease by 2 in X, at a price of 1.05m (50% Price Range Percentage)
3. B's bid to decrease by 1 in X, at a price of 1.075m (75% Price Range Percentage)

Based on the list, **Bidder B's bid to increase in Y** is processed first and **rejected** because it breaches the Activity Rule. Then, the auction system processes **Bidder B's bid to decrease in Z**, which is **accepted**. Since this bid is accepted, it is removed from the list.

The auction system starts again at the beginning of the list. Once again **Bidder B's bid to increase in Y** is processed and **rejected** because it breaches the Activity Rule. Next, **Bidder A's bid to decrease in X** is processed and **accepted**. Since this bid is accepted, it is removed from the list.

The auction system starts again at the beginning of the list. Once again **Bidder B's bid to increase in Y** is processed and **rejected** because it breaches the Activity Rule. Next, **Bidder B's bid to decrease in X** is processed and **rejected**.

In this case, compared to Case A, **Bidder B cannot switch 1 lot from X to Y**, because Bidder A's requested demand decrease in X is accepted first such that Bidder B's requested demand decrease in X, which could have freed up eligibility for an increase in Y, is rejected. Nonetheless, Bidder B's demand reduction in Lot Category Z (set as Exit Bid) is accepted.

F.2.6.6.1 Set-Aside in Lot Category D

77. 2x10 MHz of spectrum in the 2100 MHz band is set aside for any operator that, at the application date, only holds spectrum licenses that expire in September 2021, referred to as “Set-Aside Bidders”.
78. For a Set-Aside Bidder who was allocated one or more lots in Lot Category D in the Main Auction, the Base Price per lot for up to two lots will be the lower of:
 - The Resulting Price of the final round of the Main Auction in Lot Category D
 - 170 % of the Reserve Price for Lot Category D
79. For the avoidance of doubt, any Set-Aside Bidder will still pay the Resulting Price of the final round for any further lots beyond the first two in Lot Category D, as well as in any other Lot Category.

F.2.6.7 Information policy

80. After results have been calculated for a round, the auction system will provide each bidder privately with the following information:
 - The bidder’s Resulting Quantities for the round, in each Lot Category
 - The Resulting Price for the round, in each Lot Category
 - The bidder’s Eligibility for the next auction round
 - The Start Price and End Price for the next auction round, in each Lot Category
 - Information about the extent of Excess Demand after the round, in each Lot Category (see paragraph 81)
81. The level of detail on the Excess Demand in the round that the bidder receives for a Lot Category depends on the bidder’s Minimum Viable Quantity for the Lot Category.
 - a. For Lot Categories A, B, C1, C2, D and G, if Excess Demand is 3 or more, the system will show exact Excess Demand; otherwise, it will indicate that Excess Demand is 2 or less, without showing the exact number.
 - b. For Lot Categories E and F, the system will show:
 - i. To bidders with a Minimum Viable Quantity of 2 or 1, the exact Excess Demand if it is 5 or higher, or indicate that it is 4 or less, otherwise
 - ii. To bidders with a Minimum Viable Quantity of 3 or more, the exact Excess Demand if it is 9 or higher, or indicate that it is 8 or less, otherwise

F.2.6.8 Conclusion of Main Auction

82. After the conclusion of the Main Auction, each bidder is allocated, in each Lot Category, its Resulting Quantity. For each lot that a bidder is allocated, it must pay a Base Price equal to the Resulting Price in that Lot Category. Thus, each bidder must pay, in each Lot Category, its Resulting Quantity multiplied by the Resulting Price.

F.2.6.8.1 Possibility to decline winning allocations in Lot Categories B, C1 and C2

83. The value of spectrum assignments in Lot Categories B, C1 and C2 may, at least for some bidders, be conditional on also being assigned spectrum in Lot Category A. Therefore, after the Main Auction, under certain conditions, a bidder may elect to decline some of its allocations, which means that the bidder does not win the spectrum and does not have to pay the Base Price for these lots.
84. Specifically, for Lot Categories B, C1, and C2, a bidder may elect to decline some or all of the lots allocated to them if there is an auction round N such that all of the following conditions are met:
 - a. In auction round N and all subsequent rounds, the bidder placed a bid to reduce its demand in the Lot Category to zero.
 - b. In auction round N, the bidder placed a bid to decrease its demand in Lot Category A to zero lots, the decrease was applied, and the bidder placed no further bids for Lot Category A in any subsequent round.
85. A bidder who does not make an election to decline its allocation within the time frame specified by AKOS will keep its original allocation.

F.2.6.9 Potential Resale Auction

86. AKOS may initiate a Resale Auction for some or all of the Lot Categories in which there are unsold lots after the conclusion of the Main Auction, and after possible elections to decline allocations have been made.
87. In the Resale Auction, each Bidder's Minimum Viable Quantity will be 1. Bidders will be asked to specify their initial demand for each Lot Category via the auction system during a time period specified by AKOS.
88. The starting prices in the Resale Auction will be equal to the Resulting Prices from the final round of the Main Auction.
89. After the conclusion of the Resale Auction, each bidder is allocated, in each Lot Category, its Resulting Quantity. For each lot that a bidder is allocated, it must pay a Base Price equal to the Resulting Price in that Lot Category. Thus, each bidder must pay, in each Lot Category, its Resulting Quantity multiplied by the Resulting Price.

F.2.6.10 Allocations and prices determined in the Allocation Stage

90. The outcome of the Allocation Stage will be the basis for the Assignment Stage.
91. Each bidder will be allocated, in each Lot Category:
 - a. the number of lots allocated in the Main Auction that the bidder did not decline pursuant to paragraph 84, at the Base Prices determined in the Main Auction, and, in addition
 - b. if a Resale Auction was held, the number of lots allocated in the Resale Auction, at the Base Prices determined in the Resale Auction

F.2.7 Assignment stage

92. The Assignment Stage determines which specific frequency blocks are awarded to each bidder.
93. All bidders are guaranteed to win the amount of spectrum in each frequency band that they were allocated in the Allocation Stage. Bids will only affect which specific frequency blocks the bidder wins and the Assignment Prices to be paid.
94. To ensure an efficient and fair assignment of specific blocks to bidders, only certain “feasible” assignments will be considered, pursuant to the conditions described in Section F.2.7.1.1.
95. The Assignment Stage consists of a single bidding round for each band in which there is more than one feasible assignment, held in ascending frequency order. These rounds are referred to as “assignment rounds”.
96. For a band with only one feasible assignment, the specific blocks will be assigned directly to bidders. For example, the winner of the single lot in Lot Category B will be assigned the only available block.
97. In each round in the Assignment Stage, the auction system presents to each bidder the list of specific block assignment options the bidder could receive that are consistent with a feasible assignment, and the bidder can specify a bid amount for each option. If there is only one possible option for a bidder, the bidder’s bid amount for the sole option will be EUR 0 and the bidder cannot change it.
98. If a bidder does not specify a bid amount for an option, the bid amount will be taken as zero; the bidder might be assigned this option, and in that case the Assignment Price for the bidder would be zero in that band.
99. Assignment bid amounts must be specified in multiples of 100 EUR. The minimum bid for each frequency assignment option is zero, and the maximum is EUR 9,999,900.
100. After the bid submission phase of an assignment round has concluded, the auction system determines the winning assignments by finding which combination of options for each bidder maximises the sum of the associated bids.
101. Each bidder will have exactly one winning assignment bid in each frequency band in which it was allocated one or more lots in the Allocation Stage.
102. The following sections contain more detailed information regarding the feasible assignments in each assignment round, as well as the pricing rule, which determines how much the winning bidders will pay.

F.2.7.1 Constraints on possible assignments

103. An assignment of specific blocks to bidders is feasible if each frequency block is assigned to at most one bidder and all of the band specific conditions applicable to the band listed below are true.

F.2.7.1.1 Lot Categories A, E and G (700 MHz FDD, 2300 MHz, 26 GHz)

104. For Lot Categories A, E, and G, for an assignment to be feasible, it is necessary that:

- The number of lots assigned to each bidder equals the number of lots that the bidder was allocated in the Allocation Stage in the Lot Category
- All bidders which were allocated lots in the Allocation Stage win contiguous frequency blocks
- Any unsold lots are contiguous

F.2.7.1.2 Lot Categories C1 and C2 (1500 MHz)

105. In the 1400/1500 MHz band, assignment of specific frequency will be based on the allocations in Lot Categories C1 and C2, after possible conversion of C1 allocations to C2 allocations.
106. In the 1400/1500 MHz band, for an assignment to be feasible, it is necessary that:
- The number of blocks assigned to each bidder in the Core of the band is no less than the number of lots that was allocated to the bidder in Lot Category C1
 - The number of blocks assigned to each bidder in the band equals the sum of the lots the bidder was allocated in C1 and C2.
107. Of these assignments, only those assignments which guarantee contiguity to the extent possible are feasible:
- a. If there is at least one assignment of blocks to bidders in which all bidders receive contiguous blocks, then only such assignments are feasible
 - b. If assignment of contiguous blocks to all bidders is not possible, but it is possible to ensure that only one bidder is assigned non-contiguous blocks, then only those assignments are feasible in which only one bidder is assigned non-contiguous blocks. The identity of the bidder with a non-contiguous assignment may be determined via the winner determination procedure (Section F.2.7.2).
 - c. If neither a) nor b) is possible, then only those assignments are feasible in which only two bidders are assigned non-contiguous blocks. The identity of the bidders with a non-contiguous assignment may be determined via the winner determination procedure (Section F.2.7.2).
108. Note that in this band, unsold lots may or may not be assigned to contiguous blocks and may be at any position within the band.

F.2.7.1.3 Lot Category D (2100 MHz)

109. In the 2100 MHz band, a single block BD07 of 2x5 MHz, the “delayed block”, is available slightly later than the other blocks (in 2023 instead of 2021).
110. If the current holder of the delayed block was allocated at least 1 block in Lot Category D in the Allocation Stage, and there is at least one assignment in which current holder receives the delayed block and all bidders receive contiguous spectrum, then only assignments are feasible in which the delayed block is assigned to current holder and all bidders receive contiguous spectrum. Otherwise, the following rules are applied.
111. If at least one bidder was allocated at least 3 Lots in Lot Category D in the Allocation Stage, then an assignment is feasible only if:

- all bidders which were allocated lots in this band in the Allocation Stage win contiguous frequency blocks (including both delayed and not delayed blocks),
 - the number of blocks assigned to each bidder equals the number of lots that the bidder was allocated in the Allocation Stage,
 - no bidder that was assigned 2 Lots or fewer is assigned the delayed block,
 - any bidder which is assigned the delayed block is assigned at least 2x10 MHz of contiguous spectrum, which is not delayed.
112. If applying paragraph 111 would result in no assignments being feasible, or if no bidders are allocated at least 3 Lots in Lot Category D in the Allocation Stage, an assignment is feasible only if:
- all bidders which were allocated lots in this band (i.e. Lot Category D) in the Allocation Stage win contiguous frequency blocks (including both delayed and not delayed blocks)
 - the number of blocks assigned to each bidder equals the number of lots that the bidder was allocated in the Allocation Stage
113. Note that in this band, unsold lots may or may not be assigned to contiguous blocks and may be at any position within the band.

F.2.7.1.4 Lot Category F (3600 MHz)

114. For the 3600 MHz band, an assignment is feasible only if:
- the number of lots assigned to each bidder equals the number of lots that the bidder was allocated in the Allocation Stage in the Lot Category,
 - all bidders which were allocated lots in the Allocation Stage win contiguous frequency blocks,
 - bidders who were allocated less than 80 MHz are assigned lower frequencies than bidders, who were allocated 80 MHz or more,
 - any unsold lots are contiguous starting from the bottom of the band, i.e. at 3420 MHz.

F.2.7.2 Winner determination procedure

115. Following the close of the bidding phase of an assignment round, the auction system will determine exactly one winning assignment bid for each participating bidder in that band, in such a way that maximises the total value of these bids.
116. If more than one such combination of assignment bids have equal highest value, one of those combinations will be selected by the auction system at random.

F.2.7.3 Price determination

117. Assignment Prices are determined in each assignment round as follows:
118. The opportunity cost for a subset of winners is determined by considering the hypothetical winning assignment provided all winners in the set submit zero bids for all of their options (i.e. the case in which the winners in the subset are assumed to be indifferent with respect to all assignment options). The surplus is the difference between the total of all winning assignment bids in the actual winning combination minus the total of all winning assignment bids in the hypothetical winning

combination. Then, the opportunity cost for the set of winners is the sum of their winning assignment bids minus the surplus.

119. Assignment Prices are determined in each assignment round jointly for all winners in a single calculation. A unique set of Assignment Prices is found by applying the following conditions:
- First condition: Assignment Prices are required to be positive or zero, and no greater than the amount of the winning bid.
 - Second condition: the set of Assignment Prices must be sufficiently high such that the sum of Assignment Prices to be paid by each possible subset of winners must be at least their joint opportunity cost. If there is only one set of Assignment Prices that satisfies the first two conditions, this determines the Assignment Prices for that frequency band.
 - Third condition: If there are multiple sets of Assignment Prices that fulfil the first and second condition, the set(s) of Assignment Prices that minimise(s) the sum of Assignment Prices across winning bidders is selected. If there is only one set of Assignment Prices satisfying these three conditions, this determines the Assignment Prices for that frequency band.
 - Fourth condition: If there are multiple sets of Assignment Prices that satisfy the first three conditions, the set of Assignment Prices that minimises the sum of squares of differences between the Assignment Prices for each winner and the individual opportunity cost for that frequency band for that winner is selected.
120. These conditions characterise a unique Assignment Price for each winning bidder in each assignment round that is no more than their winning assignment bid. If these Assignment Prices are not amounts in whole EUR, they are rounded up to the nearest whole EUR.

F.2.7.4 End of the Assignment Stage

121. After each assignment round, once AKOS has determined the winning bids and the Assignment Prices, the following information will be released to each bidder individually and privately, and not released to other bidders:
- the specific frequency blocks assigned in the band,
 - the Assignment Price that they will need to pay for that assignment round.

F.2.8 Deposit requirements

122. Before the commencement of the auction, bidders will have to transfer their initial deposit to the value of 100% of their Initial Bid as set out in Section xxx., Deposit requirements from the Decision on Initiating a Public Tender with a Public Auction and Section A.6.2.1: Payment of a deposit for an initial bid, and in accordance with form I.6 from Frequency allocation application (the initial bid).
123. If after the completion of any Main Auction round, the deposit provided by a bidder covers less than 50% of its bid, the bidder will have to increase its deposit so that it is no less than 70% of its bid. AKOS will notify bidders if they are required to increase their deposit. For the avoidance of doubt, bidders are free to increase their deposit above the required amount in order to reduce the need of further deposit increases as the auction progresses. Bidders are also free to increase their deposit at any point during the auction process – and in particular well in advance of any required increase –

notifying AKOS of any deposit increase they have affected and providing appropriate proof of payment.

124. In case that AKOS decides to initiate a Resale Auction, before start of Resale Auction and after the completion of any round in the Resale Auction, the deposit provided by a bidder must cover at least the sum of
- a) 50% of the sum of its bid in the Resale Auction and
 - b) 50% of the Base Prices of the lots that it was allocated in the Main Auction.
- Otherwise, the bidder will have to increase its deposit so that it is no less than the sum of
- a) 70% of the sum of its bid in the Resale Auction and
 - b) 70% of the Base Prices of the lots that it was allocated in the Main Auction.
125. If AKOS requests an increase of a bidder's deposit it will notify the bidder of the deadline by which the additional amount corresponding to the increase of deposit has to be provided. Such notice will be provided no longer than 24 hours and no less than 6 hours prior to the expiry of the deadline. Bidding will be suspended until this deadline has expired.
126. If a bidder failed to increase its deposit as required, the bidder will not be able to enter bids in the next and all subsequent rounds and it will be deemed to have placed a bid to decrease its demand to zero for all Lot Categories, at the Start Price for the round and in all subsequent rounds. For the avoidance of doubt, these bids to decrease demand will be processed in accordance with the bid processing algorithm described in paragraphs 57 to 72. This means that the bidder may still be allocated a positive number of lots if not all decreases are fully accepted. The bidder will still be required to pay the full price for any lots that it is allocated.

F.2.9 Collusion

127. See Section XXX: Prohibition of collusive behaviour from the Decision on Initiating a Public Tender with a Public Auction and A.6.3.2: Prohibition of collusive behaviour. All bids of the bidders will be annulled. In this event the fees paid for the efficient use of a limited natural resource as well as for administrative costs shall be forfeited.

F.2.10 Breach of auction rules

128. AKOS may exclude a bidder who is in breach of the auction rules. A bidder excluded will forfeit its deposit and all bids made by the bidder will be cancelled.

F.2.11 Communication with AKOS

129. The auction system provides a one-way messaging system, which will be used as the primary method for AKOS to send messages to bidders during the auction.

130. Bidders may contact AKOS by telephone or email (xxxx@akos-rs.si). Further information will be made available to bidders in advance of the auction. Telephone calls will be recorded.

F.2.12 Exceptional circumstances

131. AKOS may, at its discretion:
- permit a bidder to submit a bid via telephone, if the auction manager is satisfied that the bidder is unable to submit a bid using the auction system (see further details regarding this procedure in paragraphs 131 to 134),
 - permit a bidder to submit a bid for a round after the end time of the round (but not after information about the outcome of the round has been given to bidders), if the auction manager is satisfied that the bidder could not submit the bid during the round because of technical problems.
132. If a bidder is unable to submit a bid using the auction system, then that bidder must immediately call AKOS via telephone.
133. This is permitted only in exceptional circumstances, and in cases where the phone call is commenced before the end of the auction round.
134. All phone calls will be recorded. Bidders must identify themselves and accept that the conversation is recorded. If this is not accepted, the bidder will not be permitted to place a bid. Recordings will be stored for at least six months, or for longer in the event of legal disputes following the auction.
135. When identifying themselves, bidders must provide an Offline Validation Code to provide additional proof that they are authorised to bid. Bidders who are unable to provide a correct Offline Validation Code will not be permitted to place a bid over the telephone. Bidders will be able to access a list of Offline Validation Codes via the auction user interface. Bidders are advised to print their list of Offline Validation Codes as soon as they have access to the auction system so that they are prepared in case they need them later in the auction.
136. Bidders should not rely on the availability of this back-up procedure and should ensure that they have available redundant systems that they can use in response to any technical issues that they may encounter.
137. In the case of exceptional circumstances during any stage of the auction, AKOS has the discretion to:
- postpone the end of a round in progress or the release of results of a round;
 - postpone the scheduling of further rounds;
 - cancel a round that is either underway or for which round results have not yet been released, and re-schedule the round;
 - void one or more rounds and the bids made therein, and resume the auction from an earlier round; and/or
 - void all bids received in the auction, and either suspend the auction or start the auction again.
138. AKOS determines whether a situation of exceptional circumstances has arisen. Exceptional circumstances could include, for example, widespread technical failure or concern about possible collusion amongst bidders.

F.2.13 End of the auction

139. The auction ends with the completion of the Assignment Stage. At this point, the following information will be released to all bidders:
- the identity of the winning bidders;
 - the frequency ranges awarded to each winning bidder; and
 - the final price to be paid by each winning bidder, including a breakdown of the Base Prices and Assignment Prices.
-

G Monitoring the fulfilment of coverage obligations

The Agency shall monitor the fulfilment of coverage obligations, namely:

- based on the calculation of coverage provided by the holder of the DARF and using the information about base stations submitted to the Agency by the holder of the DARF,
- based on field mobile measurements with monitoring vehicles for road and coverage railway coverage, and
- based on random measurements of service quality at locations, which the Agency conducts at its own discretion at user's locations to verify the accuracy of information submitted by the holder of the DARF.

G.1 Calculation of coverage using the information about base stations submitted

The holder of a DARF must within a month of expiry of a deadline for meeting coverage obligations as set in the DARF and at the Agency's request submit relevant documentation on network operation related to the fulfilment of coverage obligations comprising selected technical parameters and simulation of service levels provided by the network. The submitted information must comprise:

- the locations of the base stations in accordance with a specified geographical projection,
- heights above ground level in meters,
- For each sector:
 - azimuth – direction (degrees),
 - horizontal 3 dB beam width (degrees),
 - combined mechanical and electrical down tilt (degrees),
 - vertical 3 dB beam width (degrees),
 - the effective isotropic radiated power EIRP,
 - an indication of the frequency blocks used in each cell (sector),
- a map of Slovenia with base station locations and covered areas (GIS format, raster images (geotiff), defined by the Agency in cooperation with each holders of DARF), and
- a list of raster cells²⁸ covered and the coverage level calculated on that basis.

Based on the information about base stations submitted by the holders of DARFs and the tests made in the field based on the list of active base stations, the calculations shall be made to assess the fulfilment of the coverage obligations. The analysis shall be made based on technical parameters of base stations and by using the HTZ communications software (a software tool for planning and analysing telecommunication and broadcasting networks and radio frequency spectrum planning) from the French developers ATDI. The analysis shall be made on a model selected in accordance with the ITU-R P.1812 recommendation, with raster cells in the 100 x 100 m grid as population units (e.g. Geostatistical database of the Statistical Office of the Republic of Slovenia). Detailed information about the calculation procedure shall be made available when

²⁸ For calculating population coverage in the Republic of Slovenia in percent, the raster cells in the 100 x 100m grid are to be used as population units. The actual population data are taken from the database of the Statistical Office of the Republic of Slovenia. A raster cell is considered to be covered if its geometrical center is covered.

the decisions on the assignment of radio frequencies are issued in collaboration with each holder of a decision on the assignment of radio frequencies.

G.2 Monitoring coverage obligations of roads and railways

Coverage of roads railways with radio signal over commercial terrestrial mobile networks under listed conditions is checked as follows:

- Measurements at speed less than 100 km/h on Motorways AC, highways HC, and less than 80 km/h on other roads,
- Measurements at maximum driving speed on individual sections of the track,
- Measurement is the average of several readings at a distance of 100 m (outdoor).

All these obligations are fulfilled, if the measurement results are in accordance with requirements and timeline as defined in Chapter A.6.4.2.2 (Additional coverage obligations for 700 MHz FDD band).

G.3 Verification measurements

The Agency shall at its own discretion, conduct tests on the DARF holder's network and measure the quality of service at times and places of its choice in order to verify that the submitted information regarding base stations and coverage is an accurate representation of the actual state of the DARF holder's network. These tests shall be intended to verify the base station parameters, level of field strength and quality of service at some end users locations to directly verify network coverage determined by the above calculation. For the purposes of verifying the provision of FWBA service, the Agency may verify capacity and network coverage.

H Technical requirements for providing services

The Agency shall issue a decision on DARF for terrestrial systems capable of providing wireless broadband electronic communications services (TRA-WBBECS) in accordance with the valid Frequency Allocation Table Regulation (Article 26 ZEKom-1), and the valid Frequency Usage Table Act (Paragraph 1 of Article 27 ZEKom-1) (NURF) and other CEPT documents setting out the additional conditions of use defined below. The ECC reports and the CEPT reports specify the conditions / scenarios for sharing and coexistence with other services within the band and in the adjacent bands and serve as additional guidance to the obligations and as such Agency recommends that should be followed where appropriate and complementary to EU decisions, ECC decisions and ECC recommendations. Commission Implementing Regulation (EU) 2020/1070²⁹ applies for the small-area wireless access points.

H.1 Technical requirements of service provision in the 700 MHz Radio Frequency Band

The holder of the DARF must provide terrestrial wireless broadband electronic communications services in accordance with the European Parliament and of the Council (EU) 2017/899: and the Commission implementing decision (EU) 2016/687 and in accordance with the second paragraph of Article 24 of ZEKom-1 to operate in accordance with international legal acts in force in the Republic of Slovenia..

H.1.1 Other relevant documents and information

Below are listed all other relevant documents, which in addition to the conditions set in the previous section of this chapter define the method of using radio frequencies in the 700 MHz radio frequency band and must be complied with by the DARF holder, according to the scenario of use of this radio frequency band. In case of harmful interference, the parameters must be adjusted to the requirements of the specified documents.

The following decisions, recommendations, and CEPT³⁰ reports are valid for the 700 MHz radio frequency band:

- ECC/DEC/(15)01: Harmonised technical conditions for mobile/fixed communications networks (MFCN) in the band 694 – 790 MHz including a paired frequency arrangement (Frequency Division Duplex 2x30 MHz) and an optional unpaired frequency arrangement (Supplemental Downlink),
- ECC/REC/(15)01: Cross-border coordination for mobile/fixed communications networks (MFCN) in the frequency bands: 694 – 790 MHz, 1452 – 1492 MHz, 3400 – 3600 MHz and 3600 – 3800 MHz,
- ECC Report 231: Mobile coverage obligations,
- CEPT Report 29: Report from CEPT to the European Commission in response to the Mandate on “Technical considerations regarding harmonisation options for the digital dividend in the European Union” “Guideline on cross border coordination issues between mobile services in one country and broadcasting services in another country,

²⁹ Commission Implementing Regulation (EU) 2020/1070 of 20 July 2020 on specifying the characteristics of small-area wireless access points pursuant to Article 57 paragraph 2 of Directive (EU) 2018/1972 of the European Parliament and the Council establishing the European Electronic Communications Code (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1595389467054&uri=CELEX:32020R1070>)

³⁰ European Conference of Postal and Telecommunications Administration

- CEPT Report 53: Report A from CEPT to the European Commission in response to the Mandate “to develop harmonised technical conditions for the 694 – 790 MHz ('700 MHz') frequency band in the EU for the provision of wireless broadband and other uses in support of EU spectrum policy objectives”,
- CEPT Report 60: Report B from CEPT to the European Commission in response to the Mandate “to develop harmonised technical conditions for the 694 – 790 MHz ('700 MHz') frequency band in the EU for the provision of wireless broadband and other uses in support of EU spectrum policy objectives”.

Decisions, Recommendations and CEPT Reports listed in section H.1 (Technical requirements of service provision in the 700 MHz Radio Frequency Band) set out the conditions of use of the 700 MHz band and are freely available on the CEPT website at: <https://www.ecodocdb.dk/>.

Besides these Decisions, Recommendations and CEPT Reports, any amendments or new versions of these documents are also applicable, when finally adopted by EU or CEPT members and officially published.

Other regulation that have to be adhered to when using the 700 MHz radio frequency band are:

- frequencies also have to be used accordance with the other technical requirements defined in valid NURF,
- in border regions, cross-border coordination must be conducted in accordance with relevant CEPT documents, which are freely available at <https://www.ecodocdb.dk/>, and international agreements, which are available at the Agency's website: <https://www.akos-rs.si/zakoni-in-priporocila/direktive-priporocila-in-mednarodni-sporazumi>.

H.1.2 The Block Edge Masks (BEM)

The block edge masks (BEM) other relevant technical requirements are defined in European Commission implementing decision (EU) 2016/687, Annex parameters referred to in Article 3.

H.1.3 Base Station SDL E.I.R.P. limits

In accordance with ECC Report 242 in order to ensure compatibility between M2M and MFCN SDL, the BS equipment in sub-band 738 – 743 MHz has to implement the SDL E.I.R.P. limits from ECC/DEC/(15)01 in order to protect the band 733 – 736 MHz (-52 dBm/3 MHz, -55 dBm/1.4 MHz, -64 dBm/200 kHz).

Considering a separate SDL BS transmitting unit specifically designed to fulfil the LRTC requirements of the ECC/DEC/(15)01 in the band 738 – 758 MHz, it is possible to design an internal 10 pole filter providing sufficient rejection, i.e. -52 dBm/3 MHz, -64 dBm/200 kHz below 736 MHz, with 2 MHz frequency separation.

As M2M terminals are planned to be based on LTE standard Band 28 terminals, more than 2 MHz separation between M2M and SDL is usually needed to allow for colocation. Additional alternative to manage colocation may be to rely on different site solutions, e.g. by using appropriate antenna isolation.

Power limitations could be reduced, based on operators' Agreement between M2M and MFCN operator, which is notified by Agency.

H.1.4 Restrictions on demand due to digital TV usage in neighbouring countries

As the 700 MHz spectrum is in accordance EC decision (EU) 2017/899 occupied with DVB-T until 30. 6. 2020, will frequencies be available from 1. 7. 2020 on inside the state of Slovenia, where the usage will be possible without harmful interference. The applicant will be able to use the frequencies in the whole territory of the Republic of Slovenia only after switch off of digital television, which was announced by neighbouring countries as follows:

- Hungary until 6. 9. 2020,
- Croatia until 26. 10. 2021 and
- Italy until 31. 12. 2021³¹.

The possibility of using the 700 MHz band in Slovenia for public mobile services (LTE) is due to the use in the neighbouring countries for broadcasting (DVB-T/T2) until 30. 6. 2020 limited with:

- Occupancy of the 700 MHz band in Slovenia due to the influence of nearby DVB-T/T2 transmitters in neighbouring countries,
- Obligation to protect the broadcasting in neighbouring countries in transitional period.

Spectrum occupancy is calculated taking into account ITU report 2339 "Co-channel sharing and compatibility studies between digital terrestrial television broadcasting and international mobile telecommunication in the frequency band 694-790 MHz in the GE06 planning area³² for four different approaches – four different electric field strengths values (Table H-1: Field strength values for different usage conditions):

Table H-1: Field strength values for different usage conditions

Threshold	Values [dB(μV/m)]	Rx Antenna height [m]	Comment
Threshold 1	19,3	30 m	I/N = -6 dB
Threshold 2	25,3	30 m	Relaxed I/N = -6 do 0 dB
Threshold 3	31,1	30 m	Cross polarisation and I/N of = -6 dB

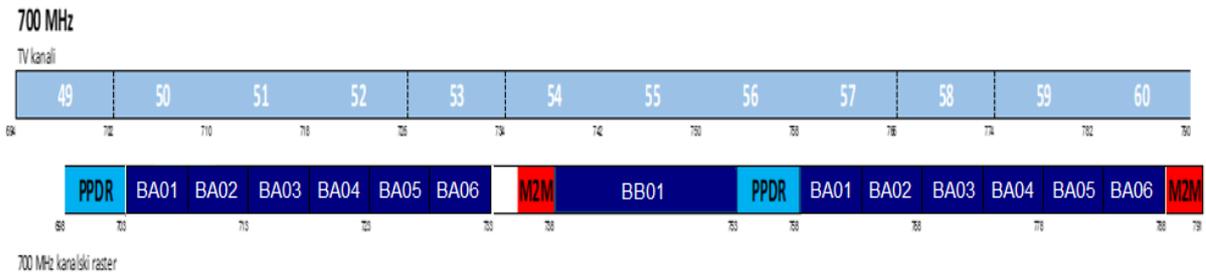
Source: GE-06 Agreement

The calculation takes into account all GE06 transmitters in neighbouring countries (operating and non-functioning) that have an impact on the territory of Slovenia (Figure H-6: The influence of DVB-T/T2 T from neighbouring countries to Slovenian territory). The calculations are made using the propagation model ITU-R 1546 and the receiving antenna height of 10 m. The rights to use frequencies in the frequency domain derive from the GE06 international agreement and consist of allotments and assignments. Given that each allocation in the vicinity of Slovenia has at least one stronger transmitter, the analysis does not take into account the direct (theoretical) impact of the allocation through the reference network.

Calculations were performed for the entire frequency range 700 MHz as well as for individual frequency blocks.

³² <https://www.itu.int/pub/R-REP-BT.2339-2015>

Figure H-1: Comparison of mobile and broadcasting channel arrangements



Source: AKOS

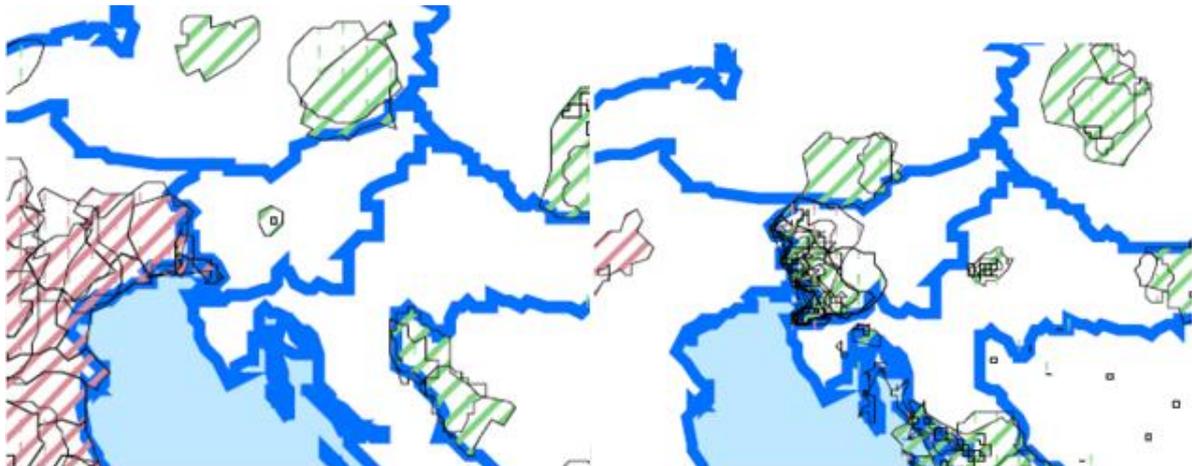
H.1.4.1 The influence of neighbouring DVB-T on Slovenia in the 700 MHz band

The spectrum 700 MHz TDD is covered by TV channels 50, 51, 52, 53, 57, 58, 59 in 60. The images below show the impact on DTT television in neighbouring countries on these channels.

Figure H-2: DTT Assignments in neighbouring countries using co-channels with TRA-WBB ECS (K50-K51)

TV channel 50 (BA01)

TV channel 51 (BA01, BA02)

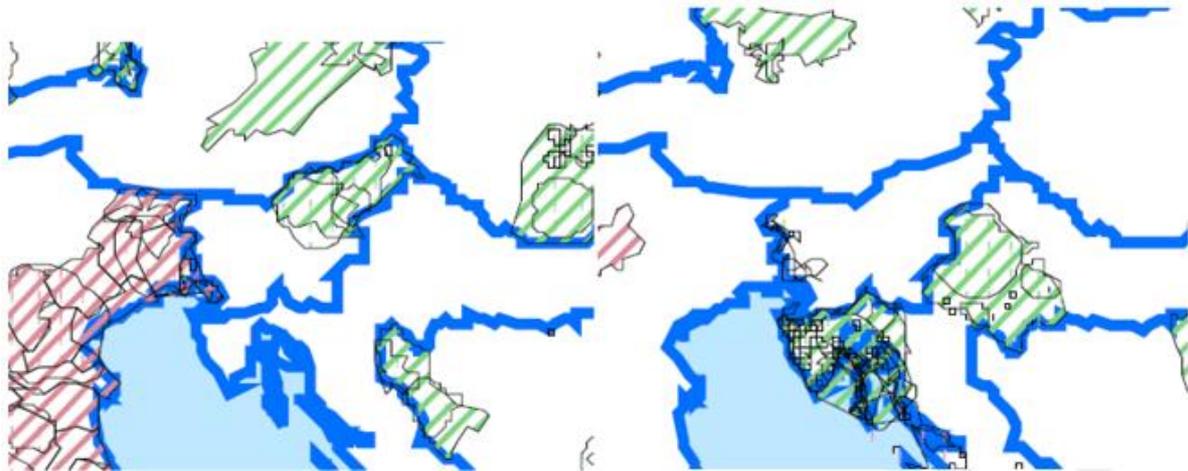


Source: AKOS

Figure H-3: DTT Assignments in neighbouring countries using co-channels with TRA-WBB ECS (K52-K53)

TV channel 52 (BA04, BA05)

TV channel 53 (BA05, BA06)



Source: AKOS

Figure H-4: DTT Assignments in neighbouring countries using co-channels with TRA-WBB ECS (K57-K58)

TV channel 57 (BA01, BA02)

TV channel 58 (BA02, BA03)



Source: AKOS

Figure H-5: DTT Assignments in neighbouring countries using co-channels with TRA-WBB ECS (K57-K58)

TV channel 59 ((BA04, BA05)

TV channel 60 (BA05, BA06)



Source: AKOS

All neighbouring countries use at least one transmitter of higher power (ERP > 10 kW) to cover their areas (allocation) (Table H-2). These include, in particular, the following transmitters:

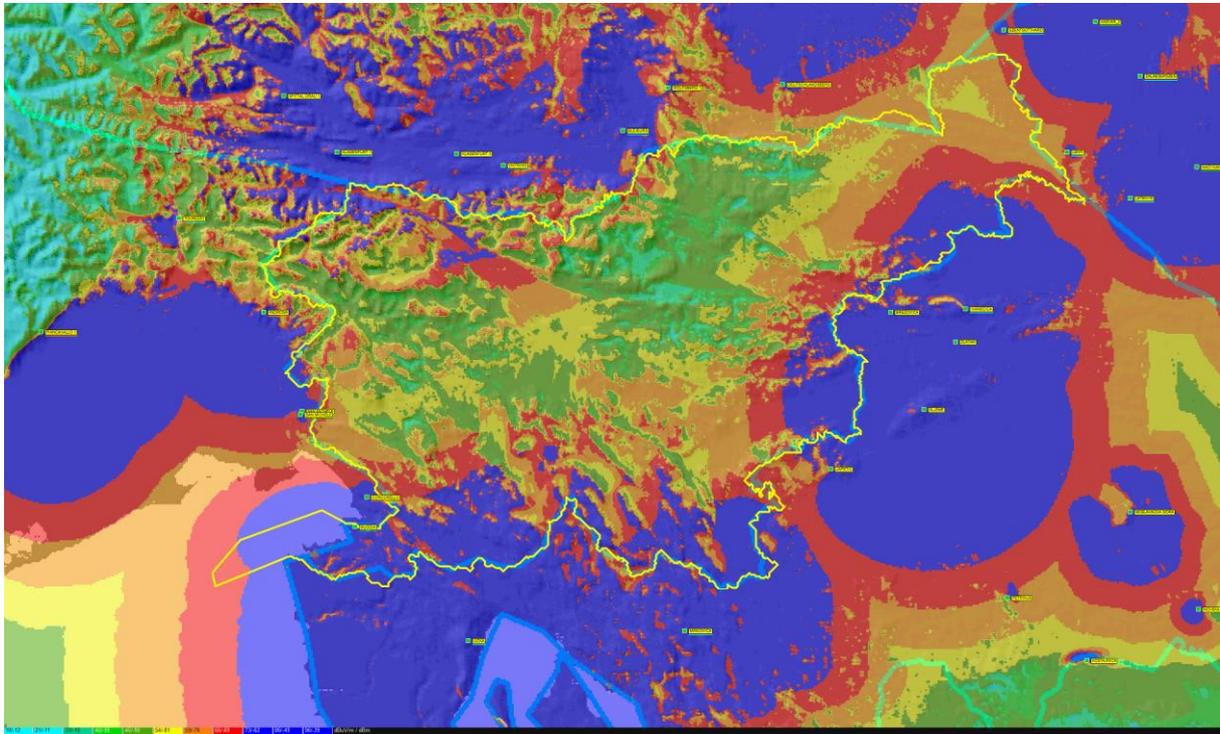
Table H-2: Bigger transmitters that have impact on the territory of Slovene Republic

Italy	Austria	Hungary	Croatia
CONCONELLO	KLAGENFURT 1	VASVAR	IVANŠČICA
MUGGIA	WOLFSBERG 1	KABHEGY	SLJEME
SAN MICHELE	GRAZ 1	NAGYKANISZA	MIRKOVICA
PEDROSA	BAD GLEICHENBERG		UČKA
PIANCAVALLO	REHNITZ		
COL VISENTIN			
MONTE MADONNA			

Source: AKOS

In addition to these transmitters, other weaker transmitters also have an impact on Slovenia (Figure H-6: The influence of DVB-T/T2 T from neighbouring countries to Slovenian territory).

Figure H-6: The influence of DVB-T/T2 T from neighbouring countries to Slovenian territory

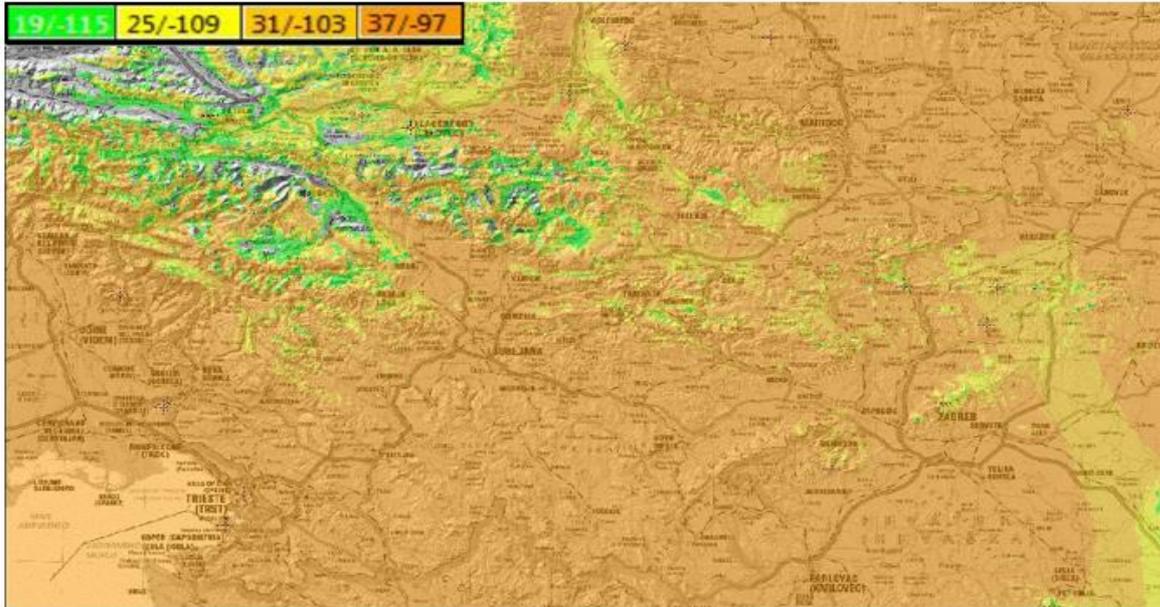


Source: AKOS

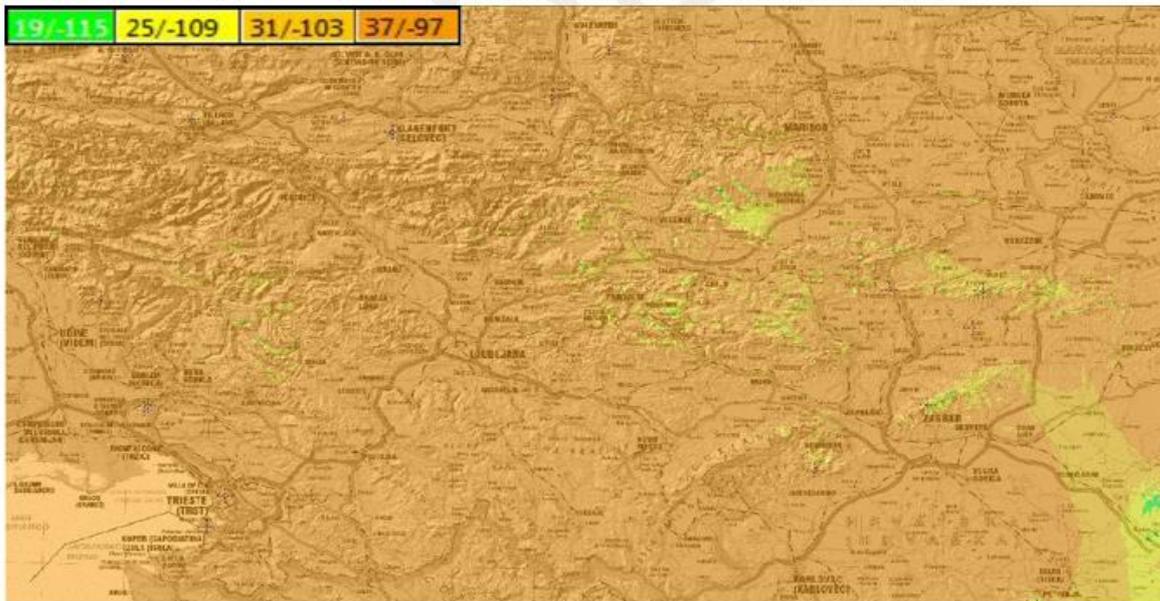
Analysis by individual blocks:

Figure H-7: The influence of DVB-T/T2 T from neighbouring countries in blockBA01 (upper) and BA02 (lower)

Analysis of the use of LTE channel 1 interfered by DVB-T channels 50 and 57



Analysis of the use of LTE channel2 interfered by DVB-T channels 50, 51, 57 and 58



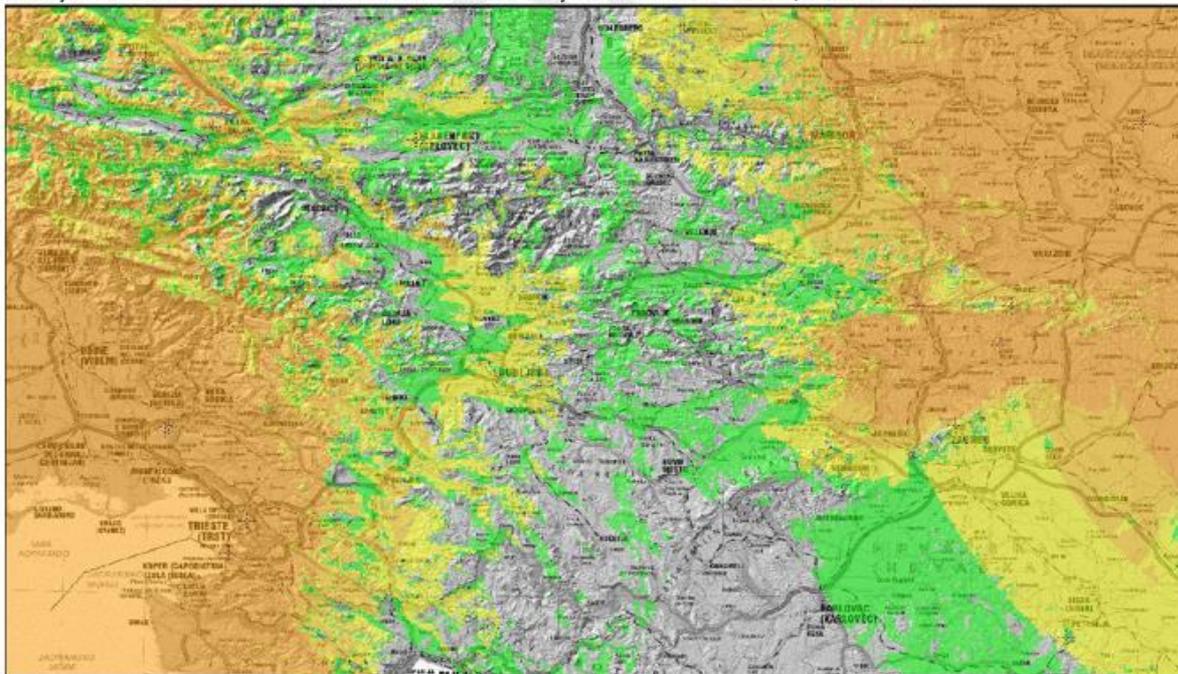
Source: AKOS

Figure H-8: The influence of DVB-T/T2 T from neighbouring countries in blockBA03 (upper) and BA04 (lower)

Analysis of the use of LTE channel3 interfered by DVB-T channels 51 and 58



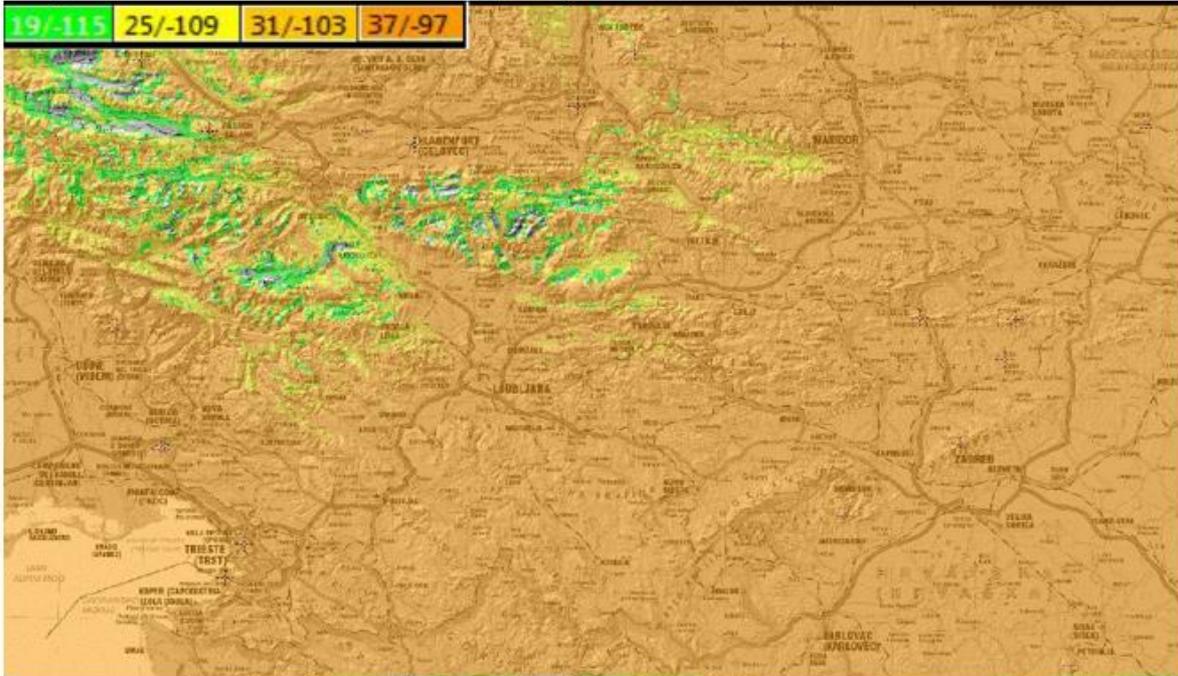
Analysis of the use of LTE channel4 interfered by DVB-T channels 52, 58 and 59



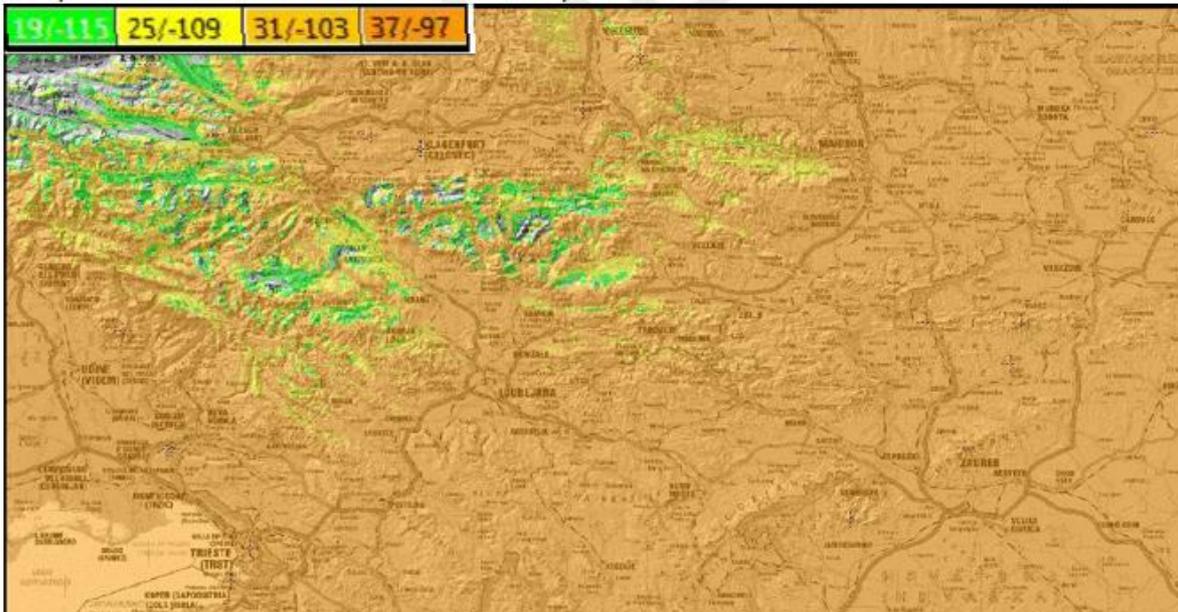
Source: AKOS

Figure H-9: The influence of DVB-T/T2 T from neighbouring countries in blockBA05 (upper) and BA08 (lower)

Analysis of the use of LTE channel5 interfered by DVB-T channels 52, 53, 59 and 60



Analysis of the use of LTE channel6 interfered by DVB-T channels 53 and 60



Source: AKOS

H.1.4.2 The impact of neighbouring DVB-T on Slovenia in 700 MHz band (SDL)

The 700 MHz SDL spectrum is covered used by television channels 54, 55 and 56. Figure H-10 shows the impact of terrestrial DTT television in neighbouring countries on these channels.

Figure H-10: The influence of DVB-T/T2 T from neighbouring countries in SDL block



Source: AKOS

H.1.4.3 The influence of LTE base stations on DVB transmitter in neighbouring countries

The GE06 international agreement determines the "trigger strength of the electric field" for base stations requiring international coordination with potentially affected countries (at an antenna height of 10 m at the border):

- 23 dB μ V/m between 582 MHz and 718 MHz
- 25 dB μ V/m above 718 MHz

In the case of one country using DVB-T/T2 and the other mobile services, base stations whose field strength exceeds certain limit values must be internationally coordinated.

The Technical arrangement between the national frequency authorities of Austria, Croatia, Hungary, Romania, the Slovak Republic and Slovenia on border coordination for terrestrial systems capable of providing electronic communications services and national options in the 700 MHz frequency band, Budapest, 15. 2. 2018³³ in Article 5 ensures the protection of broadcasting services until the DTT switch off in the neighbouring countries in the following way:

In the transition period MFCN could operate without previous cross border coordination in the field strength value is below trigger field strength for the protection of the television broadcasting service see table below. The calculation method for trigger field strength values is based on the GE-06 Agreement.

Table H-3: Cross border coordination on MFCN in the transition period (until the DTT switch off in the neighbouring countries)

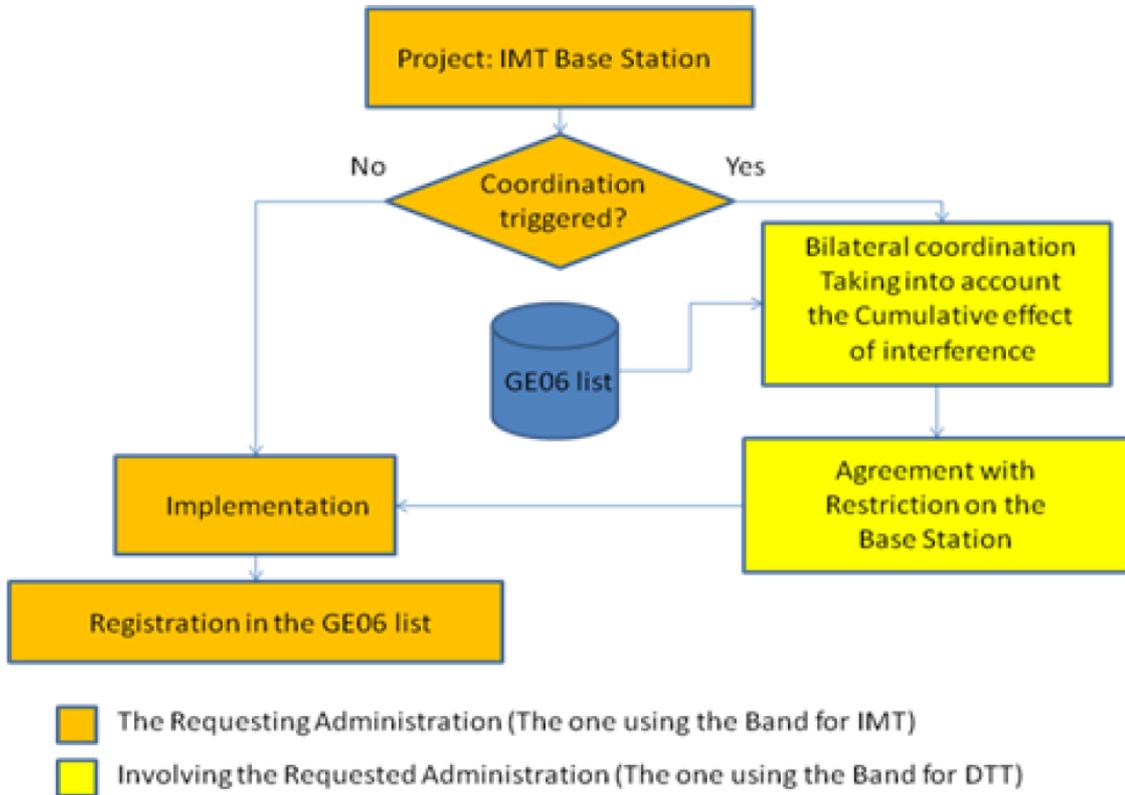
Coordination trigger field strength for the protection of the television broadcasting service	
Protection of the digital TV	25 dB μ V/m/8 MHz at the border at a height of 10 m above ground 14 dB μ V/m/8 MHz at the border at a height of 3 m above ground ³⁴

Source: GE06 Agreement

³³ <http://www.akos-rs.si/direktive,-priporocila-in-mednarodni-sporazumi>

³⁴ approximated value considering 11 dB receiving antenna height correction from 10 m to 3 m. For more accurate calculations the method described in the Article A2.1.9 of Annex-2 Chapter-2 to the GE-06 Agreement should be applied.

FigureH-11: International coordination process under Geneva 06

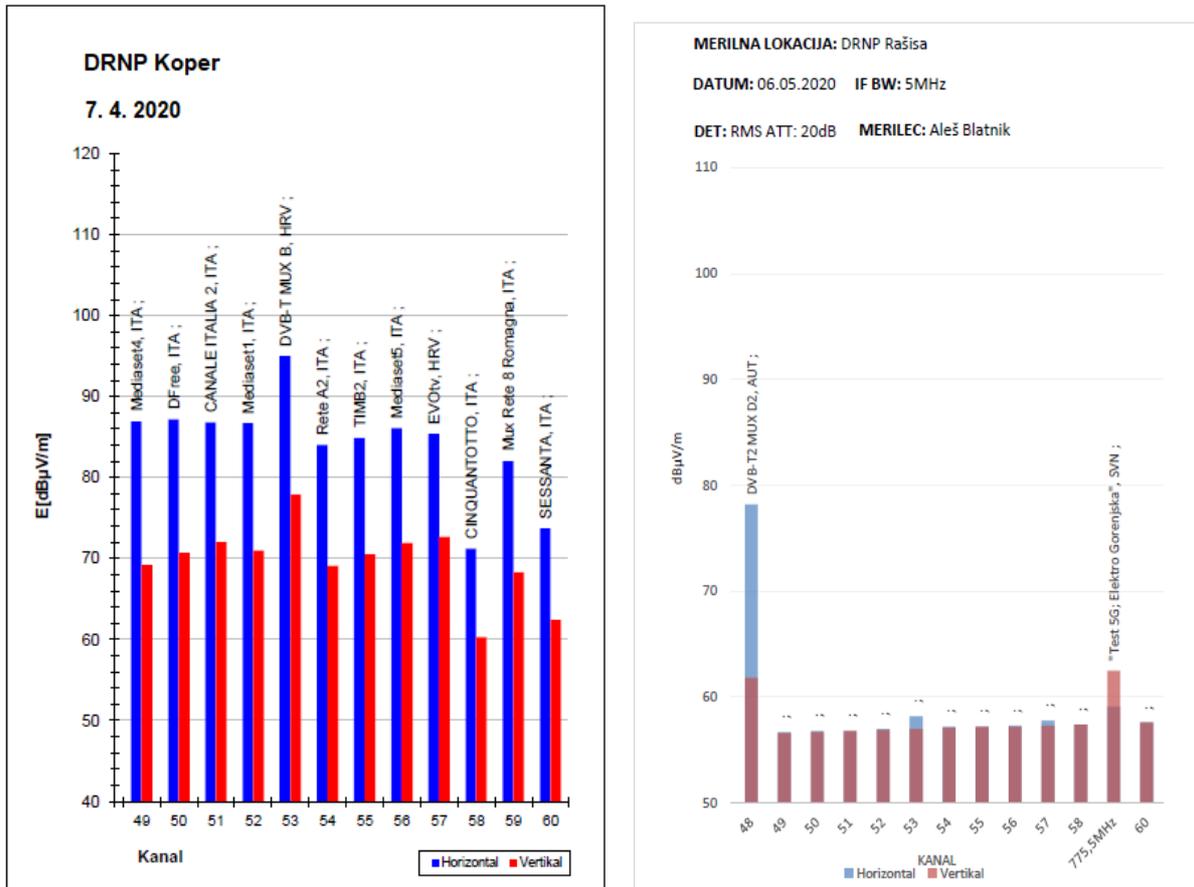


Source: AKOS, summarised after GE06 Agreement

H.1.4.4 Spectrum occupancy measurements

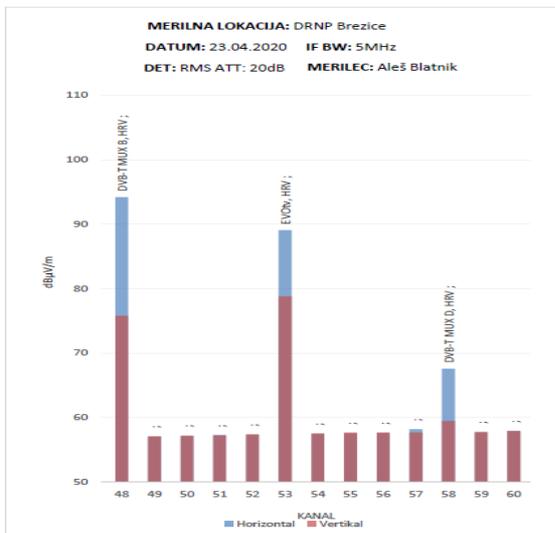
Measurements of the occupancy of the spectrum were conducted in May 2020. Results are presented below:

Figure H-12: Spectrum occupancy measurements in Koper (left) and in Rašica – Ljubljana (right) –April 2020



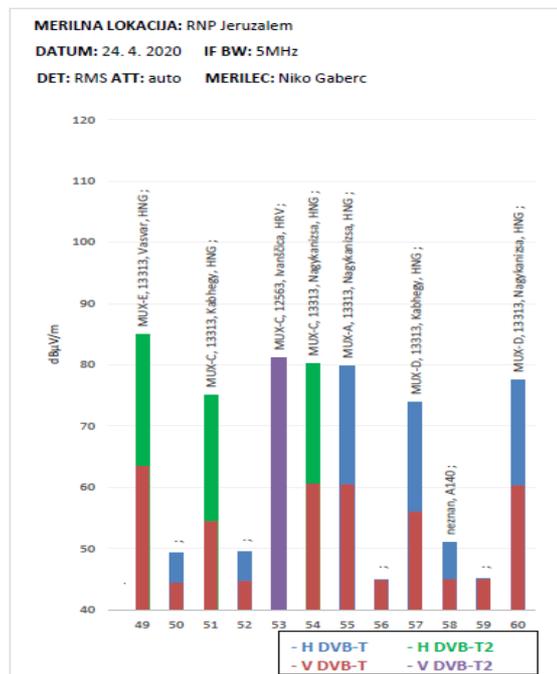
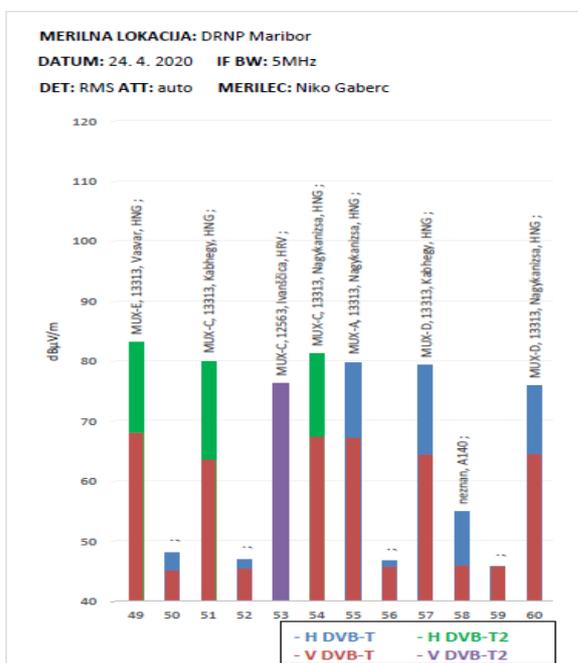
Source: AKOS

Figure H-13: Spectrum occupancy measurements in Brežice – April 2020



Source: AKOS

Figure H-14: Spectrum occupancy measurements in Maribor(left) and in Jeruzalem (right) –April 2020



Source: AKOS

H.1.5 Compatibility between mobile and broadcast services

With the objective of ensuring uninterrupted operation of radio equipment in the radio frequency bands below 694 MHz in Slovenia and in neighbouring countries, the Agency may change the DARF *ex officio* if harmful interference cannot otherwise be avoided or radio frequency protection ratio is not achieved in any other way (indent 4 of paragraph 2 of Article 57 of ZEKom-1).

In the event of interference the following are among the measures that the Agency has at its disposal:

- installation of input filters to DVB-T receivers (suppression of channels > 48),
- reducing spurious emissions from base station transmitters (filter at the transmitter side),
- changing the orientation of the DVB-T receiving antenna,
- changing in the polarization of the transmitting antenna at the base station,
- reducing the base station transmission power.

The broadcast channels actually used are listed in the Register of Radio and TV Frequencies on Agency's website³⁵.

A holder of a DARF must cooperate in exercising measures for eliminating harmful interference and finding solutions for any individual user of DVB-T network services.

The Agency may instruct a holder of a DARF for the said frequency band to reimburse the costs of eliminating harmful interference for any individual user of DVB-T network services.

H.1.6 Electromagnetic compatibility with other services in the 700 MHz Band

With the objective of adhering to item 3 of Article 52 of ZEKom-1, and preventing harmful interferences between wireless mobile communication devices and other devices (such as e.g. cable TV networks and other home communication installations) these must adhere to the two equipment EMC standards SIST EN 50529-1 and SIST EN 50529-2. In the event that the systems are not in accordance with the above two standards, and interference is caused by mobile communications, this interference of other cable-linked applications must be accepted if unavoidable due to the state of the equipment. In the event that cable-connected equipment within the frequency range of 694 – 862 MHz corresponds to the above standards, the following measures may remedy the interference caused by wireless mobile communications devices:

- reducing the transmission power in the base station sector,
- increasing of the effective power by the cable TV operator,
- using of DVB-C receivers (set-top boxes, cable modems) with adequate electromagnetic immunity,
- avoiding the use of DVB-C receivers that pass the cable TV signal through a broadband amplifier,
- using coaxial cables with adequate electromagnetic resistance,
- information and recommendations to users regarding the mutual effects of wireless mobile communications in the 700 MHz frequency range and cable TV reception.

Mobile communications operators must cooperate with cable TV network operators in exercising measures for eliminating harmful interference and finding solutions for any cable TV network services user.

If it is proven that a cable TV network operator's equipment has fulfilled the above requirement the Agency may instruct a holder of a DARF for said frequency band to reimburse the costs for eliminating harmful interference for any individual user of the cable TV network operator.

³⁵ https://www.akos-rs.si/ra-and-tv-frequencies?search=search&page=1&vrsta_postaje=dvb_t&imetnik=-1&ime_programa_radio=-1&mrezn_program_radio=-1&oddajne_tocke_radio=-1&ime_programa_sr_val=-1×haring_sr_val=-1&mux=&obmocje_pokrivanja_dvb_t=-1

H.1.7 Guidance regarding the use of PPDR

If the DARF holder will offer services for the PPDR vertical, he must comply with guidance regarding the use of PPDR are listed in documents provided in:

- ECC Report 218 WGFm: Harmonised conditions and spectrum bands for the implementation of future European public broadband PPDR systems,
- ECC Report 239: Compatibility and sharing studies for BB PPDR systems operating in the 700 MHz range.

H.1.8 Conditions of use of M2M and M2M protection in adjacent sub-band

Conditions of use and protection of M2M are listed in documents:

- ECC Report 266: The suitability of the current ECC regulatory framework for the usage of Wideband and Narrowband M2M in the frequency bands 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2.1 GHz and 2.6 GHz.

H.1.9 Conditions for use of UAS

If the DARF holder will offer UAS services via its network in this radio frequency band, he must comply with guidance regarding the use of UAS are listed in Executive summary of the ECC Report 309³⁶.

H.2 Technical requirements of service provision in the 1500 MHz Radio Frequency Band

The holder of the DARF must provide terrestrial wireless broadband electronic communications services in accordance with the Commission implementing decision (EU) 2018/661 and Commission Implementing Decision (EU) 2015/750 and in accordance with the second paragraph of Article 24 of ZEKom-1 to operate in accordance with international legal acts in force in the Republic of Slovenia.

H.2.1 Other relevant documents and information

Below are listed all other relevant documents, which in addition to the conditions set in the previous section of this chapter define the method of using radio frequencies in the 1500 MHz radio frequency band and must be complied with by the DARF holder, according to the scenario of use of this radio frequency band. In case of harmful interference, the parameters must be adjusted to the requirements of the specified documents.

³⁶ https://www.ecodocdb.dk/document/category/ECC_Reports?status=ACTIVE

The following decisions, recommendations, and CEPT reports are valid for the 1500 MHz radio frequency band:

- ECC/DEC/(13)03: The harmonised use of the frequency band 1452 – 1492 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL),
- ECC/DEC/(17)06: ECC Decision of 17 November 2017 on the harmonised use of the frequency bands 1427 – 1452 MHz and 1492 – 1518 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL),
- ECC/REC/(15)01: Cross border coordination for mobile / fixed communications networks (MFCN) in the frequency bands: 694 – 790 MHz, 1452 – 1492 MHz, 3400 – 3600 MHz and 3600 – 3800 MHz,
- ECC Report 202: Out-of-Band emission limits for Mobile/Fixed Communication Networks (MFCN) Supplemental Downlink (SDL) operating in the 1452 – 1492 MHz band,
- ECC Report 227: Compatibility Studies for Mobile/Fixed Communication Networks (MFCN) Supplemental Downlink (SDL) operating in the 1452 – 1492 MHz band,
- ECC Report 269: Least restrictive technical conditions for Mobile/Fixed Communications Networks in 1427 – 1518 MHz,
- CEPT Report 54: Report from CEPT to the European Commission in response to the Mandate “To develop harmonised technical conditions in the 1452 – 1492 MHz frequency band for wireless broadband electronic communications services in the EU,
- CEPT Report 65: Report from CEPT to the European Commission in response to the Mandate “to develop harmonised technical conditions in additional frequency bands in the 1.5 GHz range for their use for terrestrial wireless broadband electronic communications services in the Union”.

Decisions, Recommendations and CEPT Reports listed in section H.2 (Technical requirements of service provision in the 1500 MHz Radio Frequency Band) set out the conditions of use of the 1500 MHz band and are freely available on the CEPT website at: <http://www.ecodocdb.dk>.

Besides these Decisions, Recommendations and CEPT Reports, any amendments or new versions of these documents are also applicable, when finally adopted by EU or CEPT members and officially published.

Other regulation that have to be adhered to when using the 1500 MHz radio frequency band are:

- frequencies also have to be used accordance with the other technical requirements defined in valid NURF,
- in border regions, cross-border coordination must be conducted in accordance with relevant CEPT documents, which are freely available at <http://www.ecodocdb.dk>, and international agreements, which are available at the Agency’s website: <https://www.akos-rs.si/zakoni-in-priporocila/direktive-priporocila-in-mednarodni-sporazumi>.

H.2.2 Conditions for the use of band

The block edge masks (BEM) other relevant technical requirements are defined in European Commission implementing decision (EU) 2018/661 Annex parameters referred to in Article 2(1) and 2(2) and European Commission implementing decision. (EU) 2015/750 Annex B, In-block requirements and Out-of-block requirements Table 1 Base station BEM out-of-block EIRP limits within the 1 452-1 492 MHz frequency band per antenna.

H.2.3 Measures for providing compatibility with MSS

For the protection of Mobile Satellite Service (MSS), earth stations operating in the 1518 – 1559 MHz band the protection zones for all the ports and airports are defined as at the border of the property of relevant port/airport. The ports and airports that need protection are:

- ports of Koper, Izola, Piran and Lucia,
- airports of Ljubljana, Maribor, Portorož and the Cerklje ob Krki.

At the border of the protection zone, the external base stations operating in the band 1492 – 1517 MHz must not exceed the PFD limits as described in section A2.2 of ECC Report 299³⁷.

Table H-4 – Table 12 of ECC Report 299: PFD limits on MFCN BS transmitting a single channel

Phase	Phase 1			Phase 2		
	PFD limit for BS emissions in the band 1492 – 1502 MHz (dBW/m ²)	PFD limit for BS emissions in the band 1502 – 1512 MHz (dBW/m ²)	PFD limit for BS emissions in the band 1512 – 1517 MHz (dBW/m ²)	PFD limit for BS emissions in the band 1492 – 1502 MHz (dBW/m ²)	PFD limit for BS emissions in the band 1502 – 1512 MHz (dBW/m ²)	PFD limit for BS emissions in the band 1512 – 1517 MHz (dBW/m ²)
Ports and waterways	-60.9	-75.9	-83.9	No limit required	-27.9	-37.9
Airports	-32.9	-42.9	-58.2	No limit required	-27.9	-37.9

Source: ECC Report 299

Table H-5 – Table 13 of ECC Report 299: PFD limits on MFCN BS transmitting multiple channels

Phase	Phase 1		Phase 2	
	PFD limit for BS emissions in the band 1492 – 1512 MHz (dBW/m ²)	PFD limit for BS emissions in the band 1512 – 1517 MHz (dBW/m ²)	PFD limit for BS emissions in the band 1492 – 1512 MHz (dBW/m ²)	PFD limit for BS emissions in the band 1512 – 1517 MHz (dBW/m ²)
Ports and waterways	-74.9	-85.9	-30.9	-40.9
Airports	-53.5	-63.4	-30.9	-40.9

Source: ECC Report 299

For further information see as well:

- ECC Report 263 – Adjacent band compatibility studies between IMT operating in the frequency band 1492 – 1518 MHz and the MSS operating in the frequency band 1518 – 1525 MHz,

³⁷ <https://www.ecodocdb.dk/download/8f411ee1-4d48/ECC%20Report%20299.pdf>

- ECC Report 299: Measures to address potential blocking of MES operating in bands adjacent to 1518 MHz (including 1525 – 1559 MHz) at sea ports and airports.
- Conditions for use of UAS

If the DARF holder will offer UAS services via its network in this radio frequency band, he must comply with guidance regarding the use of UAS are listed in Executive summary of the ECC Report 309³⁸.

H.3 Technical requirements of service provision in the 2100 MHz Radio Frequency Band)

The holder of a DARF for the FDD paired spectrum from 1920 to 1980 MHz (connection from the terminal to the base station) and from 2110 to 2170 MHz (connection from the base station to the terminal) must provide terrestrial wireless broadband electronic communications services in accordance with the EU Commission decision (EU) 2020/667 and 2012/688/EU and in accordance with the second paragraph of Article 24 of ZEKom-1 to operate in accordance with international legal acts in force in the Republic of Slovenia.

H.3.1 Other relevant documents and information

Below are listed all other relevant documents, which in addition to the conditions set in the previous section of this chapter define the method of using radio frequencies in the 2100 MHz radio frequency band and must be complied with by the DARF holder, according to the scenario of use of this radio frequency band. In case of harmful interference, the parameters must be adjusted to the requirements of the specified documents.

The following decisions, recommendations, and CEPT reports are valid for the 2100 MHz radio frequency band:

- ECC/DEC/(06)01: ECC Decision of 24 March 2006 on the harmonised utilisation of the bands 1920 – 1980 MHz and 2110 – 2170 MHz for mobile/fixed communications networks (MFCN) including terrestrial IMT, amended on 8 March 2019,
- ERC/REC/(01)01: ERC Recommendation of 2001 on cross-border coordination for mobile/fixed communications networks (MFCN) in the frequency bands: 1920 – 1980 MHz and 2110 – 2170 MHz, latest amended on 5 February 2016,
- CEPT Report 72: Report from CEPT to the European Commission in response to the Mandate “to review the harmonised technical conditions for certain EU-harmonised frequency bands and to develop least restrictive harmonised technical conditions suitable for next-generation (5G) terrestrial wireless systems” – Report A: Review of technical conditions in the paired terrestrial 2 GHz and the 2.6 GHz frequency bands, and the usage feasibility of the 900 MHz and 1800 MHz frequency bands,
- CEPT Report 19: Report on the development of the least restrictive technical conditions for frequency bands addressed in the context of WAPECS,
- CEPT Report 39: Report on the development of the least restrictive technical conditions for 2 GHz bands,
- ERC Report 65: Adjacent band compatibility between UMTS and other services in the 2 GHz band,
- CEPT Report 62: Report from CEPT to the European Commission in response to the Mandate “Coexistence studies between seaborne UMTS and LTE with terrestrial electronic communications

³⁸ https://www.ecodocdb.dk/document/category/ECC_Reports?status=ACTIVE

networks operating in the 1710 – 1785 / 1805 – 1880 MHz, 1920 – 1980 / 2110 – 2170 MHz and 2500 – 2570 / 2620 – 2690 MHz bands”. Technical conditions for the use of LTE and UMTS MCV.

Decisions, Recommendations and CEPT Reports listed in section H.3 (Technical requirements of service provision in the 2100 MHz Radio Frequency Band)) set out the conditions of use of the 2100 MHz band and are freely available on the CEPT website at: <https://www.ecodocdb.dk/>.

Besides these Decisions, Recommendations and CEPT Reports, any amendments or new versions of these documents are also applicable, when finally adopted by EU or CEPT members and officially published.

Other regulations that must be adhered to when using the 2100 MHz radio frequency band are:

- frequencies also have to be used accordance with the other technical requirements defined in valid NURF,
- In border regions, cross-border coordination must be conducted in accordance with relevant CEPT documents, which are freely available at <https://www.ecodocdb.dk/>, and international agreements, which are available at the Agency’s website: <https://www.akos-rs.si/zakoni-in-priporocila/direktive-priporocila-in-mednarodni-sporazumi>.

H.3.2 Conditions for the use of band

Block edge masks and conditions of use for the 2100 MHz frequency band are detailed in Annex B (Technical conditions for FDD base stations) of (EU) 2020/667) and or older technologies in Annex B (Technical conditions for FDD base stations) 2012/688/EU.

H.3.3 Coexistence with MSS in 2100 MHz

This section describes guidelines for compatibility with MSS in 1980 – 2010 MHz/ 2170 – 2200 MHz.

In the case of use of the 1920 – 1980 MHz FDD band paired with 2110 – 2170 MHz close to airports the interference prevention techniques listed in ECC Report 298 may need to be applied in order to prevent harmful interference from MSS services in the 1980 – 2010 MHz/ 2170 – 2200 MHz radio frequency bands.

License holders of the 2100 MHz band should try to avoid causing interference to Inmarsat’s EAN operations at airports in Slovenia (Airports Ljubljana, Maribor, Portorož and the Cerklje ob Krki). The band 1980 – 1995 and 2170 – 2185 MHz is harmonised for mobile satellite systems providing Mobile Satellite Service in Europe, including the use of a complementary ground component (CGC). Inmarsat’s European Aviation Network (EAN) is authorised in countries throughout Europe, including in Slovenia until 2027. Upon request of MSS operator, some additional interference mitigation measures may be required in the proximity of some airports to prevent blocking of the aircraft earth station, if the interference occurs while the MSS receiver in an aeroplane is on the ground (see as well ECC Report 298).

Mobile communications operators must cooperate with airports and the MSS operator in exercising measures for eliminating harmful interference.

More details regarding coexistence with the MSS could be found in documents:

- ECC/DEC/(06)09: ECC Decision of 1 December 2006 on the designation of the bands 1980 – 2010 MHz and 2170 – 2200 MHz for use by systems in the Mobile-Satellite Service including those supplemented by a Complementary Ground Component (CGC),

- ECC Report 298: Analysis of the suitability and update of the regulatory technical conditions for 5G MFCN and AAS operation in the 1920 – 1980 MHz and 2110 – 2170 MHz band
- ECC Report 233: Adjacent band compatibility studies for aeronautical CGC systems operating in the bands 1980 – 2010 MHz and 2170 – 2200 MHz,
- ECC Report 197: Compatibility studies – MSS terminals transmitting to a satellite in the band 1980 – 2010 MHz and adjacent channel UMTS services.

H.3.4 Conditions of use of M2M

Conditions of use of M2M in 2100 MHz frequency band are described in ECC Report 266 – The suitability of the current ECC regulatory framework for the usage of Wideband and Narrowband M2M in the frequency bands 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2.1 GHz and 2.6 GHz.

H.3.5 Conditions for use of UAS

If the DARF holder will offer UAS services via its network in this radio frequency band, he must comply with guidance regarding the use of UAS are listed in Executive summary of the ECC Report 309³⁹.

H.4 Technical requirements of service provision in the 2300 MHz Radio Frequency Band

The holder of the DARF must provide terrestrial wireless broadband electronic communications services in accordance with the ECC Decision (14)02 and in accordance with the second paragraph of Article 24 of ZEKom-1 to operate in accordance with international legal acts in force in the Republic of Slovenia.

H.4.1 Other relevant documents and information

Below are listed all other relevant documents, which in addition to the conditions set in the previous section of this chapter define the method of using radio frequencies in the 2300 MHz radio frequency band and must be complied with by the DARF holder, according to the scenario of use of this radio frequency band. In case of harmful interference, the parameters must be adjusted to the requirements of the specified documents.

The following decisions, recommendations, and CEPT reports are valid for the 2300 MHz radio frequency band:

- ECC Recommendation (14)04: Cross-border coordination for mobile/fixed communications networks (MFCN) and between MFCN and other systems in the frequency band 2300 – 2400 MHz,
- ECC Report 172: Broadband Wireless Systems Usage in 2300 – 2400 MHz,
- ECC Report 205: Licensed Shared Access (LSA),
- ECC Report 216: Practical guidance for TDD networks synchronisation,

³⁹ https://www.ecodocdb.dk/document/category/ECC_Reports?status=ACTIVE

- CEPT Report 55: Report A from CEPT to the European Commission in response to the Mandate on 'Harmonised technical conditions for the 2300 – 2400 MHz ('2.3 GHz') frequency band in the EU for the provision of wireless broadband electronic communications services',
- CEPT Report 56: Technological and regulatory options for sharing between WBB and the relevant incumbent services/applications in the 2.3 GHz band.

Decisions, Recommendations and CEPT Reports listed in section H.4 (Technical requirements of service provision in the 2300 MHz Radio Frequency Band) set out the conditions of use of the 2300 MHz band and are freely available on the CEPT website at: <https://www.ecodocdb.dk/>.

Besides these Decisions, Recommendations and CEPT Reports, any amendments or new versions of these documents are also applicable, when finally adopted by EU or CEPT members and officially published.

Other regulation that have to be adhered to when using the 2300 MHz radio frequency band are:

- frequencies also have to be used accordance with the other technical requirements defined in valid NURF,
- in border regions, cross-border coordination must be conducted in accordance with relevant CEPT documents, which are freely available at <http://www.ecodocdb.dk>, and international agreements, which are available at the Agency's website: <https://www.akos-rs.si/zakoni-in-priporocila/direktive-priporocila-in-mednarodni-sporazumi>.

H.4.2 Conditions for the use of band

The block edge masks (BEM) other relevant technical requirements are defined in ECC/DEC/(14)02, Annex 2: Least restrictive technical conditions for MFCN in the 2300 – 2400 MHz band.

H.4.3 Coexistence with PMSE

This section describes guidelines for compatibility with PMSE 2300 – 2320 MHz and compatibility in frequency band below 2300 MHz – see documents:

- ECC/REC/(15)04: Guidance for the implementation of a sharing framework between MFCN and PMSE within 2300 – 2400 MHz,
- CEPT Report 58: Technical sharing solutions for the shared use of the 2300 – 2400 MHz band for WBB and PMSE,
- ECC Report 219: Characteristics of PMSE digital video links to be used in compatibility and sharing studies.

Documents are available on the CEPT website at: <https://www.ecodocdb.dk/>.

H.5 Technical requirements of service provision in the 3600 MHz Radio Frequency Band

The holder of the DARF must provide terrestrial wireless broadband electronic communications services in accordance with the Commission implementing decisions (EU) 2019/235, 2014/276/EU and 2008/411/EC: as

well as in accordance with the second paragraph of Article 24 of ZEKom-1 to operate in accordance with international legal acts in force in the Republic of Slovenia.

H.5.1 Other relevant documents and information

Below are listed all other relevant documents, which in addition to the conditions set in the previous section of this chapter define the method of using radio frequencies in the 3600 MHz radio frequency band and must be complied with by the DARF holder, according to the scenario of use of this radio frequency band. In case of harmful interference, the parameters must be adjusted to the requirements of the specified documents.

The following decisions, recommendations, and CEPT reports are valid for the 3600 MHz radio frequency band:

- ECC/DEC/(11)06: Harmonised frequency arrangements for mobile/fixed communications networks (MFCN) operating in the bands 3400 – 3600 MHz and 3600 – 3800 MHz,
- ECC/REC/(15)01: Cross border coordination for mobile / fixed communications networks (MFCN) in the frequency bands: 694 – 790 MHz, 1452 – 1492 MHz, 3400 – 3600 MHz and 3600 – 3800 MHz,
- ECC Report 203: Least Restrictive Technical Conditions suitable for Mobile/Fixed Communication Networks (MFCN), including IMT, in the frequency bands 3400 – 3600 MHz and 3600 – 3800 MHz,
- ECC Report 216: Practical guidance for TDD networks synchronisation,
- ECC Report 254: Operational guidelines for spectrum sharing to support the implementation of the current ECC framework in the 3600 – 3800 MHz range,
- ECC Report 281: Analysis of the suitability of the regulatory technical conditions for 5G MFCN operation in the 3400 – 3800 MHz band,
- CEPT Report 49: Technical conditions regarding spectrum harmonisation for terrestrial wireless systems in the 3400 – 3800 MHz frequency band”,
- CEPT Report 67: Report A from CEPT to the European Commission in response to the Mandate “to develop harmonised technical conditions for spectrum use in support of the introduction of next-generation (5G) terrestrial wireless systems in the Union” Review of the harmonised technical conditions applicable to the 3.4 – 3.8 GHz ('3.6 GHz') frequency band.

Decisions, Recommendations and CEPT Reports listed in section H.5 (Technical requirements of service provision in the 3600 MHz Radio Frequency Band) set out the conditions of use of the 3600 MHz band and are freely available on the CEPT website at: <https://www.ecodocdb.dk/>.

Besides these Decisions, Recommendations and CEPT Reports, any amendments or new versions of these documents are also applicable, when finally adopted by EU or CEPT members and officially published.

Other regulation that have to be adhered to when using the 3600 MHz radio frequency band are:

- frequencies also have to be used accordance with the other technical requirements defined in valid NURF,
- in border regions, cross-border coordination must be conducted in accordance with relevant CEPT documents, which are freely available at <http://www.ecodocdb.dk>, and international agreements, which are available at the Agency's website: <https://www.akos-rs.si/zakoni-in-priporocila/direktive-priporocila-in-mednarodni-sporazumi>.

H.5.2 Constrains in 3600 MHz frequency band

Applicants with spectrum in frequency band 3420 – 3500 MHz, in Geographic region 17 – MOZIRJE_1C_VZHOD and Geographic region 13 – GORNJA_RADGONA_1C_VZHOD will not be able to use the whole 80 MHz block, but only 1 block of 50 MHz in Geographic region 17 – MOZIRJE_1C_VZHOD (Figure H-15: Geographic region 17 – MOZIRJE_1C_VZHOD Figure H-15: Geographic region 17 – MOZIRJE_1C_VZHOD and 1 block of 60 MHz in Geographic region 13 – GORNJA_RADGONA_1C_VZHOD (Figure H-16: Geographic region 13 – GORNJA_RADGONA_1C_VZHOD).

Figure H-15: Geographic region 17 – MOZIRJE_1C_VZHOD

	21 MHz									50 MHz								21 MHz				
GOŠO	20 33																GOŠO	20 33				
3400	3405	3410	3415	3420	3425	3430	3435	3440	3445	3450	3455	3460	3465	3470	3475	3480	3485	3490	3495	3500		

Source: AKOS

Figure H-16: Geographic region 13 – GORNJA_RADGONA_1C_VZHOD

	20 MHz									60 MHz								20 MHz				
GOŠO	20 33																GOŠO	20 33				
3400	3405	3410	3415	3420	3425	3430	3435	3440	3445	3450	3455	3460	3465	3470	3475	3480	3485	3490	3495	3500		

Source: AKOS

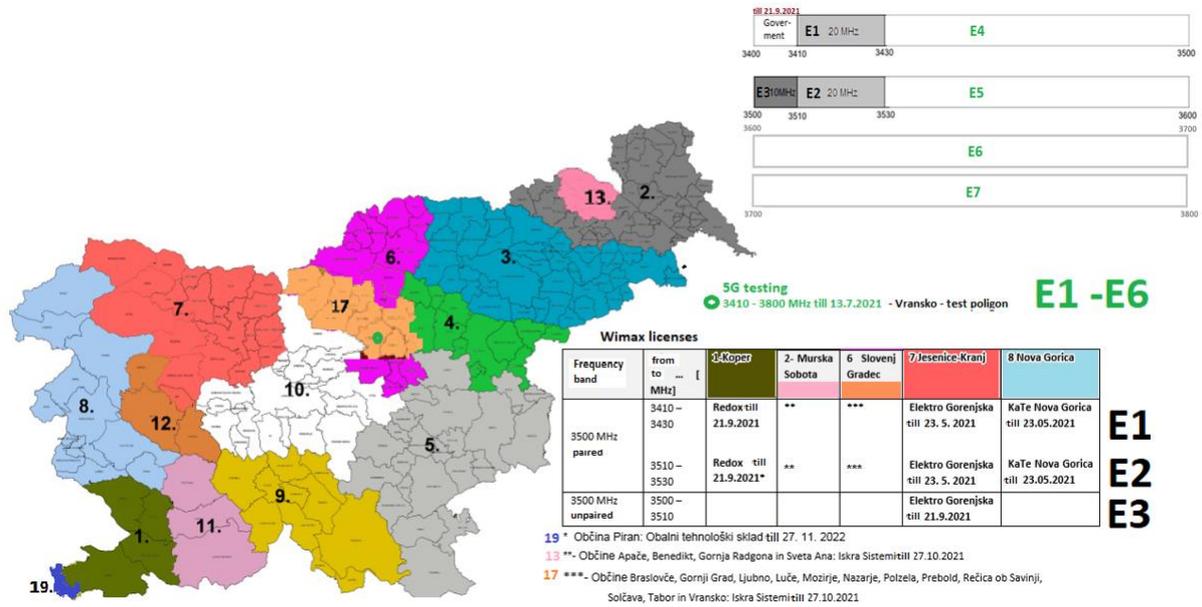
Borders of Geographic regions are borders of Municipalities within the geographic regions and are defined in Figure H-17: Overview of spectrum 3400 – 3800 MHz occupancy with existing rights and Table H-7: Overview of spectrum occupancy in the frequency band 3400 – 3800 MHz with existing rights.

Table H-6: GOŠO usage until 31. 5. 2033

Geographic region	Name of geographic region	Municipalities in geographic regions
13	GORNJA_RADGONA_1C_VZHOD	Apače, Benedikt, Gornja Radgona and Sveta Ana.
17	MOZIRJE_1C_VZHOD	Braslovče, Gornji Grad, Ljubno, Luče, Mozirje, Nazarje, Polzela, Prebold, Rečica ob Savinji, Solčava, Tabor and Vransko.

Source: AKOS

Figure H-17: Overview of spectrum 3400 – 3800 MHz occupancy with existing rights



Source: AKOS

Frequency and geographic constraints are described in Table H-7: Overview of spectrum occupancy in the frequency band 3400 – 3800 MHz with existing rights.

Table H-7: Overview of spectrum occupancy in the frequency band 3400 – 3800 MHz with existing rights

DARF owner	Expiry date	Frequency bane	Geographic area	Municipalities in the geographic area
Državna uporaba	21. 9. 2021	3400 – 3410 MHz	REPUBLIKA SLOVENIJA	REPUBLIKA SLOVENIJA
REDOX d.o.o. Portorož	21. 9. 2021	3410-3430 MHz 3510-3530 MHz	OBMOČJE 1_KOPER	Ankaran, Divača, Hrpelje – Kozina, Izola, Koper, Piran, Sežana. Ankaran, Divača, Hrpelje – Kozina, Izola, Koper, Sežana.
Elektro Gorenjska	23. 5. 2021	3410-3430 MHz 3510-3530 MHz	OBMOČJE 7_JESENICE_KRANJ	Bled, Bohinj, Cerklje na Gorenjskem, Gorenja vas – Poljane, Gorje, Jesenice, Jezersko, Komenda, Kranj, Kranjska Gora, Medvode, Naklo., Preddvor, Radovljica, Šenčur, Škofja Loka, Tržič, Vodice, Železniki, Žirovnica.
Elektro Gorenjska	21. 9. 2021	3500-3510 MHz	OBMOČJE 7_JESENICE_KRANJ	Bled, Bohinj, Cerklje na Gorenjskem, Gorenja vas – Poljane, Gorje, Jesenice, Jezersko, Komenda, Kranj, Kranjska Gora, Medvode, Naklo, Preddvor, Radovljica, Šenčur, Škofja Loka, Tržič, Vodice, Železniki, Žirovnica.
KaTe Nova Gorica	23. 5. 2021	3410-3430 MHz 3510-3530 MHz	SEVERNA PRIMORSKA	Ajdovščina, Bovec, Brda, Kanal ob Soči, Kobarid, Komen, Miren – Kostanjevica, Nova Gorica, Renče – Vogrsko, Šempeter – Vrtojba, Tolmin, Vipava.
ISKRA, d.o.o.	27. 10. 2021	3410-3430 MHz 3510-3530 MHz	13_GORNJA_RADGONA_1C_VZHOD	Apače, Benedikt, Gornja Radgona in Sveta Ana.
ISKRA, d.o.o.	27. 10. 2021	3410-3431 MHz 3510-3531 MHz	17_MOZIRJE_1C_VZHOD	Braslovče, Gornji Grad, Ljubno, Luče, Mozirje, Nazarje, Polzela, Prebold, Rečica ob Savinji, Solčava, Tabor in Vransko.
ISKRA, d.o.o.	31. 5. 2033	3400 – 3420 MHz 3480-3500 MHz	13_GORNJA_RADGONA_1C_VZHOD	Apače, Benedikt, Gornja Radgona in Sveta Ana.
ISKRA, d.o.o.	31. 5. 2033	3400 – 3421 MHz 3479-3500 MHz	17_MOZIRJE_1C_VZHOD	Braslovče, Gornji Grad, Ljubno, Luče, Mozirje, Nazarje, Polzela, Prebold, Rečica ob Savinji, Solčava, Tabor in Vransko.
Obalni tehnološki sklad d.o.o.	27. 11. 2022	3510-3530 MHz	PIRAN PODROČJE	Piran

Source: AKOS

The obligation may be modified by bilateral agreement between DARF holder and DARF holder of GOŠO ISKRA, elektro in elektronska industrija, d.d., Stegne 21, 1000 Ljubljana, which is notified by Agency and DARF shall be amended ex officio.

H.5.3 Conditions for the use of band

The block edge masks (BEM) other relevant technical requirements are defined in European Commission implementing decision (EU) 2019/235, Annex parameters referred to in Article 2, in accordance with EC Decision 2998/411/EC for older equipment acquired before 2018.

H.5.4 Conditions for use of UAS

If the DARF holder will offer UAS services via its network in this radio frequency band, he must comply with guidance regarding the use of UAS are listed in Executive summary of the ECC Report 309⁴⁰.

H.6 Technical requirements of service provision in the 26 GHz Radio Frequency Band

The holder of the DARF must provide terrestrial wireless broadband electronic communications services in accordance with the Commission Implementing Decision (EU) 2020/590 and n (EU) 2019/784 and in accordance with the second paragraph of Article 24 of ZEKom-1 to operate in accordance with international legal acts in force in the Republic of Slovenia.

H.6.1 Other relevant documents and information

Below are listed all other relevant documents, which in addition to the conditions set in the previous section of this chapter define the method of using radio frequencies in the 26 GHz radio frequency band and must be complied with by the DARF holder, according to the scenario of use of this radio frequency band. In case of harmful interference, the parameters must be adjusted to the requirements of the specified documents.

The following decisions, recommendations, and CEPT reports are valid for the 26 GHz radio frequency band:

- ECC/DEC/(18)06: Harmonised technical conditions for Mobile/Fixed Communications Networks (MFCN) in the band 24.25-27.5 GHz
- ECC/REC/(19)01: ECC Recommendation of 8 March 2019 on technical toolkit to support the introduction of 5G while ensuring, in a proportionate way, the use of existing and planned EESS/SRS receiving earth stations in the 26 GHz band and the possibility for future deployment of these earth stations,
- ECC/REC/(20)01: ECC Recommendation of 6 March 2020 on guidelines to support the introduction of 5G while ensuring, in a proportionate way, the use of existing and planned FSS transmitting earth stations in the frequency band 24.65-25.25 GHz and the possibility for future deployment of these earth stations
- CEPT Report 68: Report B from CEPT to the European Commission in response to the Mandate “to develop harmonised technical conditions for spectrum use in support of the introduction of next-generation (5G) terrestrial wireless systems in the Union” Harmonised technical conditions for the 24.25 – 27.5 GHz ('26 GHz') frequency band,
- Draft ECC Report 296: Toolbox for the most appropriate synchronisation regulatory framework including coexistence of MFCN in 24.25 – 27.5 GHz in unsynchronised and semi-synchronised mode,
- ECC Report 303: Guidance to administrations for Coexistence between 5G and Fixed Links in the 26 GHz band ("Toolbox")
- ECC Report 216: Practical guidance for TDD networks synchronisation,

⁴⁰ https://www.ecodocdb.dk/document/category/ECC_Reports?status=ACTIVE

— ECC Report 317 “Additional work on 26 GHz to address spectrum use under authorisation regimes other than individual rights of use: Technical toolkit to assist administrations”, Decisions, Recommendations and CEPT Reports listed in section H.6 (Technical requirements of service provision in the 26 GHz Radio Frequency Band) set out the conditions of use of the 26 GHz band and are freely available on the CEPT website at: <https://www.ecodocdb.dk/>.

Besides these Decisions, Recommendations and CEPT Reports, any amendments or new versions of these documents are also applicable, when finally adopted by EU or CEPT members and officially published.

Other regulation that have to be adhered to when using the 26 GHz radio frequency band are:

- frequencies also have to be used accordance with the other technical requirements defined in valid NURF,
- in border regions, cross-border coordination must be conducted in accordance with relevant CEPT documents, which are freely available at <http://www.ecodocdb.dk>, and international agreements, which are available at the Agency’s website: <https://www.akos-rs.si/zakoni-in-priporocila/direktive-priporocila-in-mednarodni-sporazumi>.

H.6.2 Conditions for the use of band

The Base station and Terminal station additional baseline power limit block are defined in Commission Implementing Decision (EU) 2020/590, other Block Edge masks (BEM) and another relevant technical requirements are defined in European Commission implementing decision (EU) 2019/784, Annex technical conditions referred to in Articles 2 and 3.

H.6.3 Sharing with FS in the sub-band 24.5 – 26.5 GHz

Guidelines for possible sharing with FS in the sub-band 24.5 – 26.5 GHz are given in the ECC Report 303: Guidance to administrations for Coexistence between 5G and Fixed Links in the 26 GHz band ("Toolbox").

H.6.4 Support for the introduction of 5G – protection of EESS/SRS

Guidance on the possible sharing of FSS in the 24.5 - 26.5 GHz band is given in Recommendation ECC (20) 01 - guidelines to support the introduction of 5G while ensuring, in a proportionate way, the use of existing and planned FSS transmitting earth stations in the frequency band 24.65-25.25 GHz and the possibility for future deployment of these earth stations.

Technical toolkit to support the introduction of 5G while ensuring, in a proportionate way, the use of existing and planned EESS/SRS receiving earth stations in the 26 GHz band and the possibility for future deployment of these earth stations is given in Recommendation ECC (19) 01.

H.6.5 Conditions for use of UAS

The holder of a UAS in this band shall not use it until additional studies have been performed on a national basis and / or measures have been taken to ensure the protection of the EESS/SRS.

According to (EU) 2020/590 amending (EU) 2019/784 and ECC/DEC/(18)06 "MFCN in the 24.25 – 27.5 GHz band and ECC Report 309 only communications for connectivity from terminals on-board UAV to base stations is authorized

The connectivity from aerial UEs to BSs may have a significant impact, e.g. on separation distance from EESS/SRS earth stations, which requires further study.

The 26 GHz band could be suitable for various high bitrate 5G UAS applications, however, for the time being there has been no study performed for UAS communication this band in ECC Report. 309.

H.7 Unwanted emissions

General unwanted emission conditions are specified in ERC Recommendation 74-01.

I Forms

I.1 General information about the provider

Agency for Communication Networks and Services of the Republic of Slovenia

Stegne 7

SI-1000 Ljubljana

Slovenia

Subject: APPLICATION FOR THE PUBLIC TENDER WITH PUBLIC AUCTION FOR THE AWARD OF RADIO FREQUENCIES FOR PROVISION OF PUBLIC COMMUNICATIONS SERVICES IN RADIO FREQUENCY BANDS 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz AND 26 GHz, published in the Official Gazette of the Republic of Slovenia no. XXX/2020 of dd.mm.2020.

I.1.1 Legal entity

Company name:	
Company address:	
Headquarters:	
Company registration number:	
VAT ID number:	
Telephone number:	
Fax number:	
E-mail:	
Legal representative:	



Signature of the legal representative:	
Other persons representing the company (full name and signature): Fields left unfilled should be struck through	
Person authorized for signing the application:	
Bank account no. (IBAN no.):	
Bank name:	
Bank identification code (BIC):	

Date:

The signature of the legal representative:

I.1.2 Natural person

Full name (or name of the company for a sole proprietor):	
Signature:	
Permanent (and temporary) residence address:	
Personal identification number (EMŠO):	
VAT ID number:	
Telephone number:	
Fax number:	
E-mail:	
Person authorized for signing the application:	
Bank account no. (IBAN no.):	
Bank name:	
Bank identification code (BIC):	

Date:

The signature of the legal representative:



I.2 Applicants' statements

I, the undersigned *
(full name)

*state the name of the legal representative or their authorized representative as stated on Form I.1.1 or state the full name of the natural person or their authorized person as stated on Form I.1.2

for applicant
(Company name / Full name)

- I declare that I am familiar with the content of the tender documentation in Public Tender for the Assignment of Radio Frequencies for providing public communications services, and that I accept its provisions,
- I declare that this application is valid 8 month form the submission of the offer,
- I declare that all the data in the application are true and accurate, and I agree that the Agency may annul the issued DARFs without returning the payment for the efficient use of a limited natural resource if it is found after the completion of the public tender procedure that the applicant provided false or untrue data in the application, or in the event that such facts come to light during the public tender procedure I shall not receive the already paid tender bonds or the advance for the administrative costs and the already paid deposits,
- I declare that the applicant is solvent, and there are no procedures of bankruptcy, compulsory settlement, compulsory liquidation or removal from the court registry without liquidation launched against the applicant, and that there is no valid reason that its current operations or any court or other procedures that the applicant is involved in, could cause such procedures to be initiated,
- I declare that the applicant shall maintain its ownership structure, as stated in this application, until the issue of the decision from paragraph 6 of Article 45 of ZEKom-1, and that it shall not have changes in ownership in a way that would be in opposition to the requirements of the public tender,
- I declare that the applicant shall adhere to the provisions of the tender documentation regarding information confidentiality as regards the public tender, and regarding the prohibition of collusion, and that it shall not act in such a way that could threaten the integrity of the public tender procedure, and that it agrees that the Agency may annul the issued decisions on the assignment of radio frequencies, if it is found after the completion of the public tender procedure that the applicant acted in such a way, or in the event that such findings occur during the course of the public tender, the applicant shall not receive the returned payment for the tender bond, nor the advance of administrative costs, and the already paid deposits.

Date:

Signature of the legal representative/authorized person ⁴¹
or the signature of a natural person/authorized person ⁴²

⁴¹ if the applicant is a legal entity
⁴² if the applicant is a natural person



I.3 Authorization for signing the application

I, the undersigned *
(full name of authorized person)

*state the name of the legal representative as stated on Form I.1.1 or state the full name of the natural person as stated on Form I.1.2.

authorize
(full name of authorized person)

number of identity document
(number of identity document)

to sign the application for the public tender with a public auction for the radio frequency bands 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz and 26 GHz, published in the Official Gazette of the Republic of Slovenia no. XXX.

Date:

Signature of the legal representative/authorized person ⁴³
or the signature of a natural person/authorized person ⁴⁴

⁴³ if the applicant is a legal entity

⁴⁴ if the applicant is a natural person



I.4 Appointment of 3 people who shall be authorized to submit bids for the applicant during the public auction

I, the undersigned *
(full name of authorized person)

*state the name of the legal representative as stated on Form I.1.1 or state the full name of the natural person as stated on Form I.1.2.

authorize
(full name of authorized person)

number of identity document
(number of identity document)

phone number of the authorized person

email address of the authorized person

authorize
(full name of authorized person)

number of identity document
(number of identity document)

phone number of the authorized person

email address of the authorized person

authorize
(full name of authorized person)

number of identity document
(number of identity document)



phone number of the authorized person...../

email address of the authorized person...../

to submit bids in the public auction as part of the public tender for the radio frequency bands 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz and 26 GHz, published in the Official Gazette of the Republic of Slovenia no. XXX.

Date:

Signature of the legal representative/authorized person ⁴⁵
or the signature of a natural person/authorized person ⁴⁶

⁴⁵ if the applicant is a legal entity

⁴⁶ if the applicant is a natural person



I.5 Statement of payment of the tender bond

The undersigned*
(full name)

*state the name of the legal representative or their authorized representative as stated on Form I.1.1 or state the full name of the natural person or their authorized person as stated on Form I.1.2.

declare that the applicant has paid the tender bond in the amount of **€X.XX** for the public tender with a public auction for the radio frequency bands 700 MHz, 1500 MHz, 2100 MHz, 2300 MHz, 3600 MHz and 26 GHz, published in the Official Gazette of the Republic of Slovenia no. XXX, to the bank account of the Agency, Stegne 7, 1000 Ljubljana: IBAN: SI56 0110 0637 0284 040, SWIFT: BSLJSI2X, with reference number XXXXXXXXXXXX.

I am attaching a receipt of payment to the statement.

Date:

Signature of the legal representative/authorized person⁴⁷
or the signature of a natural person/authorized person⁴⁸

⁴⁷ if the applicant is a legal entity

⁴⁸ if the applicant is a natural person

I.6 Initial Bid

The Form comprise the applicants binding application, which must in its entirety conform to the spectral caps defined in Chapter A.5.1 of the tender documentation (Spectrum caps). The number of lots for which the bidder is bidding must comply with the requirements of the chapter C.2.7 (Initial Bid (Form I.6))

The applicant must fill this Form completely, even if it does not wish to submit a bid for individual lots in individual frequency bands. In this case, it must write the number zero (0) in the section of the form on the number of lots in the individual frequency band that they do not to submit a bid on, and sign, stamp and initial the form.

In the case of the public tender, the indication of lots that are the subject of the public tender may not be the subject of a supplement of this form. An application that does not include the required forms or where these forms are not correctly filled in shall be excluded from further procedure.

Company name / Full name of Applicant:

[]

A	Available lots:	6
	Lot size	2 x 5 MHz
	Reserve price per lot	[N/A]
	Eligibility points per lot:	[N/A]
	The number of lots the applicant is interested in:	[]
	Minimum Viable Quantity of lots	[zberite element.]
B	Available lots:	1
	Lot size	1 x 10 MHz
	Reserve price per lot	[N/A]
	Eligibility points per lot:	[N/A]
	The number of lots the applicant is interested in:	[]
C1	Available lots:	4
	Lot size	1 x 10 MHz
	Reserve price per lot	[N/A]
	Eligibility points per lot:	[N/A]

	The number of lots the applicant is interested in:	[]
	Minimum Viable Quantity of lots	[zberite element.]
C2	Available lots:	4
	Lot size	1 x 10 MHz
	Reserve price per lot	[N/A]
	Eligibility points per lot:	[N/A]
	The number of lots the applicant is interested in:	[]
	Minimum Viable Quantity of lots	[zberite element.]
D	Available lots:	12
	Lot size	2 x 5 MHz
	Reserve price per lot	[N/A]
	Eligibility points per lot:	[N/A]
	The number of lots the applicant is interested in:	[]
	Minimum Viable Quantity of lots	[zberite element.]
E	Available lots:	7
	Lot size	1 x 10 MHz
	Reserve price per lot	[N/A]
	Eligibility points per lot:	[N/A]
	The number of lots the applicant is interested in:	[]
	Minimum Viable Quantity of lots	[zberite element.]
F	Available lots:	38
	Lot size	1 x 10 MHz
	Reserve price per lot	[N/A]
	Eligibility points per lot:	[N/A]
	The number of lots the applicant is interested in:	[]
	Minimum Viable Quantity of lots	[zberite element.]
G	Available lots:	5



Lot size	1 x 200 MHz
Reserve price per lot	[N/A]
Eligibility points per lot:	[N/A]
The number of lots the applicant is interested in:	[]

Note: The minimum viable quantity of lots for resale auction (AR 87) is set to 1. Participation in resale auction is not obligatory.

Date:

Signature of the legal representative/authorized person ⁴⁹
or the signature of a natural person/authorized person ⁵⁰

⁴⁹ if the applicant is a legal entity

⁵⁰ if the applicant is a natural person



I.7 Statement on the submission of documents in accordance with the requirements of the Tender Documentation

The undersigned*
(full name)

*state the name of the legal representative or their authorized representative as stated on Form I.1.1 or state the full name of the natural person or their authorized person as stated on Form I.1.2.

I declare that in accordance with the requirements and conditions of the public tender I am attaching the following documents:

- General information about the applicant (Form I.1.1 or I.1.2),
- Applicant's statements (Form I.2),
- Information on the applicant's ownership structure (no form),
- Authorization for signing the application (Form I.3),
- Financial, organizational and technical plans regarding the construction and administration of the mobile communication network (business plan) (no form),
- Nomination of 3 people who shall be authorized to submit bids for the applicant during the public auction (Form I.4),
- Statement and confirmation of payment of the tender bond (Form I.5),
- List of the frequency lots the applicant is interested in (Initial Bid) (Form I.6),
- Statement on the submission of documents in accordance with the requirements of the tender documentation (Form I.7),

Date:

Signature of the legal representative/authorized person ⁵¹
or the signature of a natural person/authorized person ⁵²

⁵¹ if the applicant is a legal entity
⁵² if the applicant is a natural person

J Annexes

This section provides a list of problematic areas (critical road sections and hard-to-reach areas) where at least one operator provides poor mobile coverage. In these areas, shared use is permitted in accordance with Section A.6.5.1 (Allowance of frequency pooling and active sharing in challenging areas).

These areas have been determined based on mobile coverage analysis in 2018. It comprises areas that lacked the coverage of at least one of the three leading mobile operators in 2018, where rescue operations were required according to the data from Administration of the Republic of Slovenia for Civil Protection and Disaster Relief and the Ministry of the Interior.

J.1 Road critical sections - motorways, highways, main roads and regional roads category I and II

Table J-1: Motorways, highways, main roads and regional roads category I and II

Road label*	Section	Critical section
1	Vič – Dravograd – Maribor – (Koroški most – Cesta proletarskih brigad – Tezno) – Miklavž	Meja R Avstrija – Dravograd
11	Koper (pristanišče) – Dragonja	Padna – meja R. Hrvaška
102	Robič – Kobarid – Peršeti – Tolmin – Idrija – Kalce – Logatec	Kobarid – Idrija
103	Peršeti – Nova Gorica – Šempeter	Volče – Nova Gorica
106	Ljubljana jug – Škofljica – Ribnica – Kočevje – Petrina in Škofljica – Šmarje – Sap	Ribnica – meja R. Hrvaška
108	Ljubljana (Črnuče) – Litija – Hrastnik – Zidani Most	Ljubljana (Črnuče) – Litija – Hrastnik – Zidani Most
203	Predel – Bovec – Kobarid	Meja R. Italija – Bovec
204	Godovič – Črni Vrh – Col – Ajdovščina	Godovič – Črni Vrh – Col
206	Kranjska Gora – Vršič – Trenta – Bovec	Kranjska Gora – Vršič – Trenta
207	Godovič – Črni Vrh – Col – Ajdovščina	Godovič – Črni Vrh – Col – Ajdovščina
208	Črni Kal – Aver – Gračišče – Sočerga in Rižana – Mostičje	Gračišče – meja R. Hrvaška
209	Lesce – Bled – Bohinjska Bistrica – Jezero	Bled – Bohinj
210	Zgornje Jezersko – Preddvor – Kranj – Škofja Loka – Gorenja vas – Cerklje – Želin in Škofja Loka – Jeprca	meja R. Avstrija – Preddvor
213	Bloška Polica – Pudob – Babno Polje	Pudob – Babno Polje
216	Ivančna Gorica – Žužemberk – Soteska – Črnomelj	Krka – Soteska
219	Slovenska Bistrica – Poljčane – Podplat in Mestinje – Bistrica ob Sotli – Čatež ob Savi	Bistrica ob Sotli – Čatež ob Savi
231	Gibina – Razkrižje – Ljutomer	Gibina – Razkrižje
401	Žaga – Učja	Žaga – Učja (meja R. Italija)
403	Bača – Petrovo Brdo – Podrošt – Češnjica – Škofja Loka	Bača – Petrovo Brdo – Podrošt – Češnjica
405	Divača – Famlje – Ribnica	Divača – Famlje – Ribnica
407	Gorenja vas – Ljublanica – Vrhnika	Gorenja vas – Ljublanica – Vrhnika
408	Logatec – Žiri – Trebija	Logatec – Žiri – Trebija
414	Kamnik – Ločica	Kamnik – Ločica
415	Želodnik – Drtija – Izlake	Kandrše – Izlake

417	Šmartno – Ljubež v Lazih – Moravče – Tihaboj – Mirna	Šmartno – Ljubež v Lazih – Moravče – Tihaboj – Mirna
418	Mokronog – Zbure – Škocjan – Dobruška vas – Šentjernej	Škocjan – Mokronog
424	Boštanj – Planina – Dežno – Črnlolica	Boštanj – Planina – Dežno – Črnlolica
430	Maribor (Ptujška) – Slivnica – Slovenska Bistrica – Slovenske Konjice – Celje	Slovenske Konjice – Vojnik
431	Gornji Dolič – Stranice	Gornji Dolič – Stranice
436	Počehova – Zgornja Kungota – Jurij ob Pesnici	Počehova – Zgornja Kungota – Jurij ob Pesnici

Source: AKOS, summarised after DECREE on road categorisation ⁵³

J.2 Road critical sections - Regional roads category III touristic roads

Table J-2: Regional roads category III touristic roads

Road label*	Section	Critical section
604	Ročinj – Lig	Lig – Kambreško
605	Kambreško – Solarji – Livek	Kambreško – Livek
609	Ajdovščina – Predmeja – Lokve in Čepovan – Most na Soči	Ajdovščina – Predmeja – Lokve in Čepovan – Most na Soči
621	Kalce – Hrušica – Col	Kalce – Hrušica – Col
632	Ilirska Bistrica – Zabiče – Novokračine in Jelšane – Novokračine	Zabiče – Jelšane
641	Ljubljana – Brezovica	Polhov Gradec – Šentjošt nad Horjulom
643	Preserje – Rakitna – Cerknica	Beč – Kamnik pod Krimom
645	Ljubljana (Litijška) – Zadvor – Šmartno pri Litiji	Besnica – Šmartno pri Litiji
647	Perovo – Grosuplje – Mlačevo – Krka in Mlačevo – Rašica	Grosuplje – Krka in Grosuplje – Videm
653	Sodražica – Hrib – Trava – Podplanina	Sodražica – meja s Hrvaško
655	Dolenja vas – Gotenica – Kočevska Reka	Dolenja vas – Gotenica – Kočevska Reka
656	Kočevska Reka – Borovec – Dragarji – Osilnica	Kočevska Reka – Borovec – Dragarji – Osilnica
660	Črnomelj – Adlešiči – Žuniči	Dolenjci – Žuniči
679	Radeče – Breg – Sevnica – Brestanica	Radeče – Breg – Sevnica – Brestanica
687	Dole – Ponikva – Loče	Dole – Ponikva – Loče
701	Ruta – Pesek – Rogla – Zreče – Zeče	Ruta – Rogla
706	Ožbalt – Zgornja Kapla – Remšnik in Hajdičev mlin – Gradišče	Ožbalt – meja R Avstrija
724	Hodoš – Domanjševci – Kobilje	Hodoš – Prosenjakovci
726	Renkovci – Črenšovci – Razkrižje in Stročja vas – Pavlovci	Stročja vas – Pavlovci
RT 907	Krnica – Zgornja Radovna – Dovje	Krnica – Zgornja Radovna – Dovje
RT 919	Podzemelj – Adlešiči in Žuniči – Vinica – Stari trg	Vinica – Stari trg

⁵³ Uradni list RS, št. 102/12, 35/15, 38/15, 78/15, 21/16, 52/16, 64/16, 41/17, 63/17, 78/19 in 89/20

RT 923	Stahovica – Kamniška Bistrica	Stahovica – Kamniška Bistrica
RT 924	Podlom – Kranjski Rak – Luče	Podlom – Kranjski Rak – Luče
RT 929	Hoče – Bellevue in Areh – Cojzerica – Šumik – Tinčeva bajta – Sveti Trije kralji – Osankarica – Lukanja	Areh – Cojzerica – Šumik – Tinčeva bajta – Sveti Trije kralji – Osankarica – Lukanja
RT 930	Pesek – Oplotnica	Pesek – Oplotnica
720	Sotina – meja R Avstrija	Zadnji km do meje

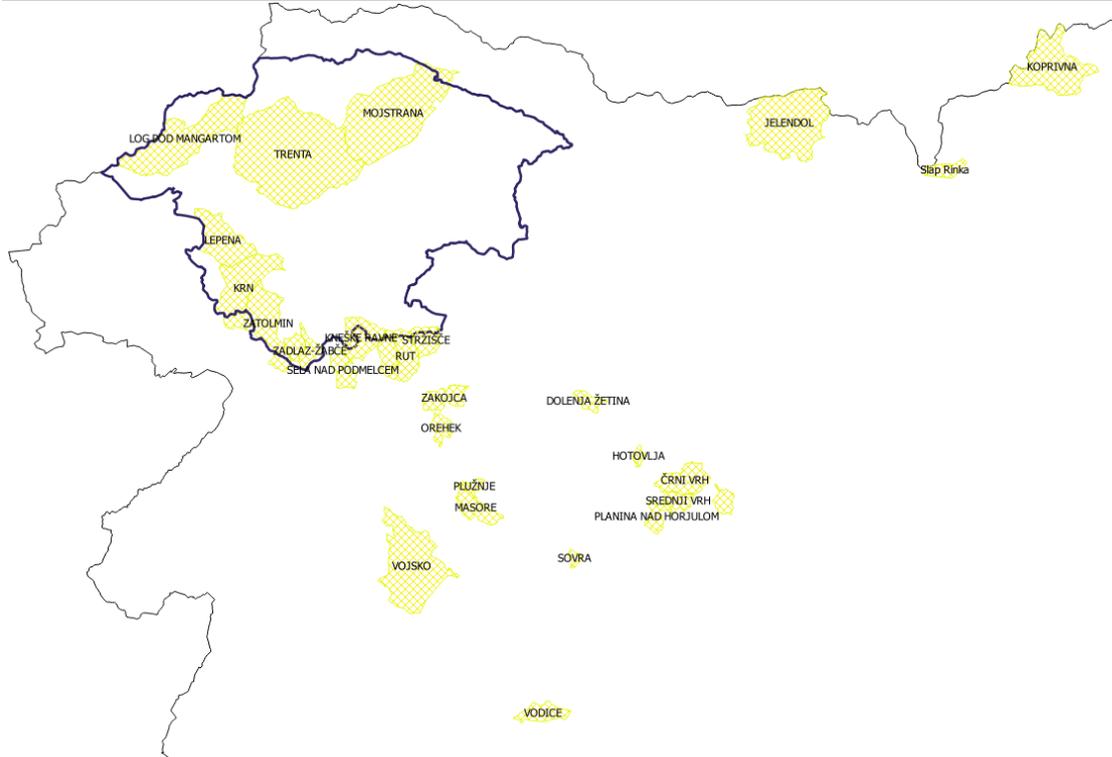
Source: AKOS, summarised after DECREE on road categorisation

Table J-3: Settlements in Triglav National Park (TNP and Settlements in other areas difficult to reach

Settlements in Triglav National Park (TNP):	Settlements in other areas difficult to reach::
KRN	Slap Rinka
LEPENA	Žiri_SOVRA
LOG POD MANGARTOM	Dobrova – Polhov Gradec_PLANINA NAD HORJULOM
MOJSTRANA	Gorenja vas – Poljane_DOLENJA ŽETINA
TRENTA	Dobrova – Polhov Gradec_POLHOV GRADEC
ZADLAZ – ČADRG	Tolmin_RUT
ZADLAZ – ŽABČE	Tolmin_SELA NAD PODMELCEM
ZATOLMIN	Idrija_VOJSKO
	Cerkno_ZAKOJCA
	Tolmin_GRANT
	Tolmin_STRŽIŠČE
	Dobrova – Polhov Gradec_SREDNJI VRH
	Gorenja vas – Poljane_HOTOVLJA
	Tolmin_KNEŠKE RAVNE
	Ajdovščina_VODICE
	Idrija_MASORE
	Cerkno_OREHEK
	Dobrova – Polhov Gradec_ČRNI VRH
	Cerkno_PLUŽNJE
	Črna na Koroškem_KOPRIVNA
	Tržič_JELENOL

Source: AKOS

Figure J-1: Graphical presentation of settlements in areas difficult to reach



Source: AKOS