

Annex 2

Consultation

Tender Document in the
Procedure for Spectrum Award
in the 3410 to 3800 MHz Range

NON BINDING TRANSLATION

Vienna, 21 February 2018

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NON BINDING TRANSLATION

1 Goals of the award procedure

This award procedure will bring to market the 5G pioneer band of 3.4 to 3.8 GHz, consisting of high frequency spectra with relatively unfavourable propagation characteristics. These spectra will on the one hand support mobile telecoms in providing high bandwidths (especially in urban areas); on the other hand, they can also be used by regional providers to supply broadband service to customers in peripheral areas, in this way meeting the goal of achieving universal internet access in future, even in disadvantaged regions. At 390 MHz in frequency usage rights, the bandwidth to be awarded is considerably larger than was awarded in the past. This amount of spectrum should in principle be capable of meeting the requirements of differing market participants.

The basis of any award procedure is firstly to define the goals pursued by the regulatory authority in carrying out the specific procedure. This process follows clear provisions of law. Core concerns are the legal certainty of the award procedure, efficient frequency usage, safeguarding competition and innovation, and the best possible coverage of residents and businesses with services. Maximising revenue is obviously not an award goal – prices are determined within the framework of an auction by supply and demand.

In the government programme for 2017–2022, priority is given to making modern infrastructure available as a foundation for digitisation. Powerful digital infrastructure is framed here as a prerequisite for deploying digital technologies such as those used for autonomous driving and Industry 4.0. Access to modern broadband infrastructure will be the deciding factor in whether businesses succeed at international level, employees are able to work from their homes or young people have to relocate from rural areas. Thus, as an intermediate step along the path towards the gigabit network, it is necessary to pursue the goal of supplying every point in the country with broadband coverage at a minimum speed of 100 Mbps. The goal is to be among the very first pioneers to roll out 5G. The general preconditions here (such as expanded broadband networks and rolling out the 5G standard) need to be met in order to ensure the success of Austrian residents and businesses. Awarding this frequency band will contribute towards this goal.

2 General legal conditions

The Telekom-Control-Kommission (TKK) is conducting a procedure for awarding spectrum, as specified in Art. 55 of the TKG 2003, in this case in the 3410–3800 MHz frequency range (also referred to below as the 3.4 to 3.8 GHz range).

2.1 General conditions under Austrian law

The current invitation to tender is based on the 2003 Telecommunications Act (TKG 2003), Federal Law Gazette (FLG) I No. 70/2003 as last amended by FLG I No. 134/2015. Current provisions of Austrian procedural law also apply, in particular the 1991 General Administrative Procedure Act, FLG No. 51/1991 as last amended by FLG I No. 161/2013.

The TKK's competence for the awarding of spectrum as set out in Art. 55 TKG 2003 results from Art. 54 Par. 3 No. 2 in conjunction with Art. 117 No. 10 TKG 2003. Pursuant to Art. 54 Par. 3 No. 2 TKG 2003, the regulatory authority is responsible for spectrum award as well as for any modification or revocation of a licence relating to spectra for which a provision as referred to in Art. 52 Par. 3 TKG 2003 (where the number of frequencies is limited) has been made in the frequency usage plan.

For the frequency ranges considered here, such a provision was made in the Ordinance of the Federal Minister of Transport, Innovation and Technology on frequency utilisation (*Frequenznutzungsverordnung 2013*), FLG II No. 63/2014 as last amended by FLG II No. 390/2016.

2.2 Spectrum award procedure

Art. 55 Par. 1 TKG 2003 requires the regulatory authority to assign the frequencies entrusted to the authority to that applicant who meets the general requirements set out in Art. 55 Par. 2 No. 2 TKG 2003 and guarantees the most efficient usage of the spectrum. This is determined based on the amount offered for the frequency licence fee.

The spectrum award procedure consists of two steps:

1. Once the applications have been received, the regulatory authority verifies whether the requirements set out in Art. 55 Par. 2 No. 2 TKG 2003 have been met (cf. section 5.3). Any applicants not meeting the requirements are excluded from the spectrum award procedure, as specified in Art. 55 Par. 8 TKG 2003.
2. The second step is carried out in the form of an auction.

2.3 Collusion

In the context of procedures for awarding spectrum, the Telecommunications Act refers repeatedly to the possibility of collusion.

Art. 55 Par. 8 TKG 2003 in conjunction with Art. 55 Par. 9 TKG 2003 lays down the principle that collusion of applicants prior to or during the auction procedure can lead to exclusion of those applicants from further procedures.

The regulatory authority is additionally entitled to cancel the invitation to tender and to terminate the procedure if applicants are found to have behaved collusively and an efficient, fair and non-discriminatory procedure cannot be conducted (Art. 55 Par. 12 No. 1 TKG 2003).

Other potential grounds for exclusion from the procedure are threats against competitors as well as disclosure of participation in the auction, of bids, or of bidding strategies, even prior to the auction procedure.

The auctioneer will take all suitable measures to prevent collusive behaviour. Specific mention is made here of the obligation of bidders to allow the presence of a staff member of the regulatory authority in the bidders' areas at any time during the auction.

In connection with possible offences relating to collusion, reference is made here to provisions of general competition law and to Art. 168b of the Austrian Criminal Code (*Strafgesetzbuch*).

2.3.1 Bidder alliances in the assignment stage

Parties winning frequency blocks in the principle stage can participate individually in the assignment stage or alternatively, after completion of the award stage, form bidder alliances to participate in the assignment stage. The parties winning frequency blocks in the principle stage will, on completion of that stage, be provided with all information relevant for forming a bidder alliance (e.g. winners of individual blocks in the various regions).

The prerequisites for forming any bidder alliance are:

- a) the total quantity of frequency blocks won by a potential bidder alliance during the principle stage of the auction must not exceed the spectrum cap applying to the most limited member of the bidder alliance;
- b) any winner of frequency blocks in the principle stage can belong to one bidder alliance at most.

The option of forming bidder alliances in the assignment stage is intended to support efficient assignment or distribution of the acquired frequency blocks among the bidders in the individual regions. It should be observed here that bidder alliances in the assignment stage do not represent a breach of or a case for applying the rules relating to collusion or to consortia as defined in section 5.3.4.

Bidders winning frequency blocks in the principle stage have a period of ten working days as of the end of that stage to notify the regulatory authority of their intention to form a bidder alliance and to provide justification (see Appendix H for sample form). The required details include:

- Identity of each party winning frequency blocks in the principle stage who is to join the bidder alliance
- Nominated member of the bidder alliance ('leading member')

The main responsibilities of the leading member:

- Payment of the additional price for the participation of the bidder alliance in the assignment stage
- Notification to the regulatory authority of the specific frequency blocks to be assigned to each member of the bidder alliance

The leading member of the bidder alliance is responsible for payment of the additional price. The members of the bidder alliance are jointly and severally liable for the bids submitted by the bidder alliance.

The TKK reviews whether the requirements have been met and, where this is not the case, can prohibit the forming of a bidder alliance before the assignment stage begins.

In the assignment stage, bidder alliances are treated as individual bidders, with the members' frequency blocks aggregated. This means that contiguous frequency blocks are assigned to bidder alliances within each region and that, where possible, they receive the same frequencies across regions. If more than one member of a bidder alliance has won spectrum in the same region, the bidder alliance is directly responsible for dividing up the individual frequency blocks in that region among those members, while the nominated leading member of the bidder alliance is required to notify the regulatory authority of this distribution, giving details of the specific blocks in each of the regions, within ten working days of the end of the assignment stage. If the distribution is not in accordance with the outcome of the principle stage or not in compliance with the efficiency criterion, the TKK can object to the distribution and refuse to assign any contiguous blocks within one region to one winner from the award stage. If no notice is given of the distribution or if objections to it exist for the reasons mentioned above, the TKK will divide up the blocks, assigning them randomly where necessary.

A sample form for providing notification of a bidder alliance is provided in Appendix H.

Detailed information is provided in the draft Auction Rules (Appendix E, chap. 5 Assignment stage).

2.4 Cancellation of the invitation to tender and termination of the procedure

Art. 55 Par. 12 TKG 2003 authorises the regulatory authority to cancel the invitation to tender and to terminate the procedure at any stage, in either case where there is good cause, and in particular under one of the following conditions:

1. the regulatory authority identifies collusive behaviour among applicants and/or an efficient, fair and non-discriminatory procedure cannot be conducted;
2. no or only one applicant meets the requirements set out in Par. 2;
3. no or only one applicant meeting the requirements set out in Par. 2 actually participates in the procedure for determining the highest bid;
4. the procedure results in the applicants requesting less frequency spectrum than has been specified for assignment.

None of these conditions justifies any claim to compensation; claims based on official liability remain unaffected thereby.

In the view of the authority calling for tenders, a 'good cause' may exist where procedures are currently pending that relate to a change in ownership structure of market participants involved in the tender procedure and, as a result, an open, fair and non-discriminatory procedure cannot be guaranteed.

2.5 Spectrum award

Spectrum is usually awarded within one month of when the TKK publishes the outcome of the auction.

2.6 Transfer of spectrum and change of ownership

Art. 56 Para. 1 TKG 2003 permits the transfer of frequency usage rights, on condition of prior approval by the TKK. Transfer refers to both the sale of – all or parts of – the frequency usage rights or the temporary transfer of rights.

2.7 Joint use under TKG 2003

As set out in Art. 8 Par. 2 TKG 2003, providers of public communications networks are entitled to joint use of antenna masts and high-voltage masts. With regard to other rights of joint use, reference is made here to the rules specified in Art. 8 TKG 2003. Reference is additionally made in this context to section 3.7.

3 Goods under auction

3.1 Regions

A total of 39 frequency packages in each of ten regions are to be put to auction. The division into regions is based on political borders (provinces/municipalities) and results in five urban and five rural regions. A detailed list of the municipalities that have been combined to form each region can be viewed in Appendix G. The figure below shows the division into regions using differing colours.

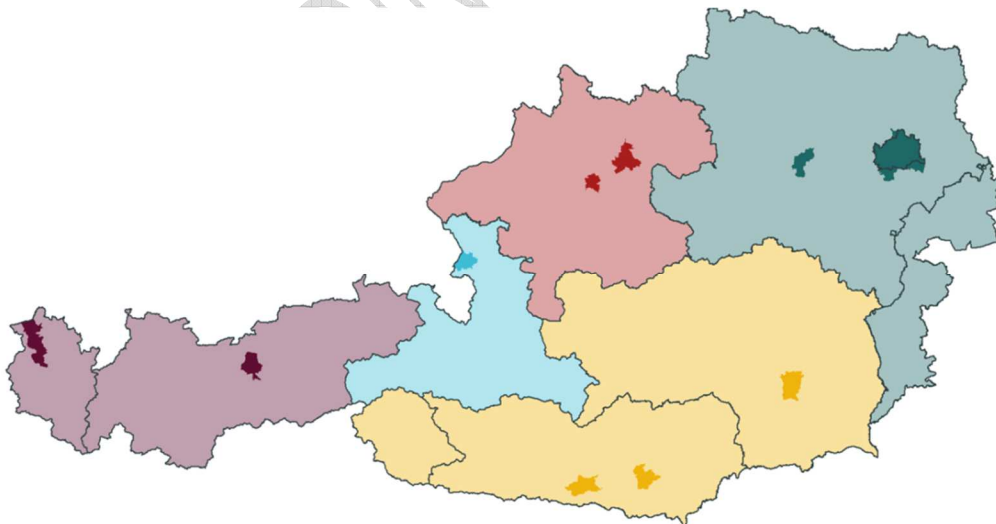


Figure 1: Division into regions

The table below describes the regions:

Label	Name	Description ¹
A01u	Region 1 urban	Vienna +, St Pölten
A01r	Region 1 rural	Vienna, Burgenland and Lower Austria except A01u
A02u	Region 2 urban	Linz+, Wels+
A02r	Region 2 rural	Upper Austria except A02u
A03u	Region 3 urban	City of Salzburg+
A03r	Region 3 rural	Salzburg except A03u
A04u	Region 4 urban	Innsbruck+, Bregenz+
A04r	Region 4 rural	North Tyrol and Vorarlberg except A04u
A05u	Region 5 urban	Graz+, Villach, Klagenfurt
A05r	Region 5 rural	Styria, East Tyrol and Carinthia except A05u

Table 1: Description of the ten regions

The following frequency blocks of 10 MHz each are to be awarded for each region:

Designation	Frequency range	Beginning of usage period
L01	3410 – 3420 MHz	1 January 2020
L02	3420 – 3430 MHz	1 January 2020
L03	3430 – 3440 MHz	1 January 2020
L04	3440 – 3450 MHz	1 January 2020
L05	3450 – 3460 MHz	1 January 2020
L06	3460 – 3470 MHz	1 January 2020
L07	3470 – 3480 MHz	1 January 2020
L08	3480 – 3490 MHz	1 January 2020

¹ Adjoining municipalities are also incorporated into certain urban regions. Those urban regions are designated in the table with a plus sign. The detailed list of municipalities in each region can be viewed in Appendix G.

L09	3490 – 3500 MHz	1 January 2020
L10	3500 – 3510 MHz	1 January 2020
L11	3510 – 3520 MHz	1 January 2020
L12	3520 – 3530 MHz	1 January 2020
L13	3530 – 3540 MHz	1 January 2020
L14	3540 – 3550 MHz	1 January 2020
L15	3550 – 3560 MHz	1 January 2020
L16	3560 – 3570 MHz	1 January 2020
L17	3570 – 3580 MHz	1 January 2020
L18	3580 – 3590 MHz	1 January 2020
L19	3590 – 3600 MHz	1 January 2020
L20	3600 – 3610 MHz	As of service of the award decision
L21	3610 – 3620 MHz	As of service of the award decision
L22	3620 – 3630 MHz	As of service of the award decision
L23	3630 – 3640 MHz	As of service of the award decision
L24	3640 – 3650 MHz	As of service of the award decision
L25	3650 – 3660 MHz	As of service of the award decision
L26	3660 – 3670 MHz	As of service of the award decision
L27	3670 – 3680 MHz	As of service of the award decision
L28	3680 – 3690 MHz	As of service of the award decision
L29	3690 – 3700 MHz	As of service of the award decision
L30	3700 – 3710 MHz	As of service of the award decision
L31	3710 – 3720 MHz	As of service of the award decision
L32	3720 – 3730 MHz	As of service of the award decision
L33	3730 – 3740 MHz	As of service of the award decision

L34	3740 – 3750 MHz	As of service of the award decision
L35	3750 – 3760 MHz	As of service of the award decision
L36	3760 – 3770 MHz	As of service of the award decision
L37	3770 – 3780 MHz	As of service of the award decision
L38	3780 – 3790 MHz	As of service of the award decision
L39	3790 – 3800 MHz	As of service of the award decision

Table 2: Frequency blocks

The frequency blocks L01 to L39 will be awarded in the auction. Where specific lots are designated in the auction, the designation is made up of a combination of the region and the frequency block.

For example, the block with the designation A03uL01 refers to the 3410–3420 MHz frequency range in the A03u region (City of Salzburg+).

3.2 Conditions for synchronisation between networks

This section contains specifications relating to temporal synchronisation between different types of network.

3.2.1 Definitions

- ‘Default frame structure’: a frame structure as described in the section below.
- ‘Other frame structure’: a frame structure differing from the default frame structure.
- BEM: a mask used to decouple frequencies (‘BEM’ refers to ‘block edge mask’).
- Small cell: a base station with a maximum EIRP of 24 dBm per 20 MHz of carrier.

3.2.1.1 Definition of default BEM

The specifications are based on the format in the Annex to the Commission Implementing Decision of 2 May 2014 (2014/276/EU).

BEM Element	Frequency Range	Power Limit
In-block	Block assigned to the Licensee	68 dBm/5 MHz per antenna
Transitional Region	-5 to 0 MHz offset from lower block edge 0 to 5 MHz offset from upper block edge	Min(PMax -40, 21) dBm/5 MHz EIRP per antenna
Transitional Region	-10 to -5 MHz offset from lower block edge 5 to 10 MHz offset from upper block edge	Min(PMax -43, 15) dBm/5 MHz EIRP per antenna
Baseline	3400–3800 MHz (except for in-block and transitional regions)	Min(PMax -43, 13) dBm/5 MHz
Additional baseline	Below 3400 MHz and above 3800 MHz	-34 dBm/5 MHz EIRP per cell

Figure 2: Default BEM ('permissive block edge mask')

3.2.1.2 Definition of restrictive BEM

The specifications are also based on the format in the Annex to the Commission Implementing Decision of 2 May 2014 (2014/276/EU).

BEM Element	Frequency Range	Power Limit
In-block	Block assigned to the Licensee	68 dBm/5 MHz per antenna
Baseline	3400–3800 MHz (except for in-block frequencies)	-34 dBm/5 MHz EIRP per cell
Additional baseline	Below 3400 MHz and above 3800 MHz	-34 dBm/5 MHz EIRP per cell

Figure 3: Restrictive BEM ('restrictive block edge mask')

3.2.2 Introduction

When setting up their networks, spectrum holders should work together in such a way that avoids any damaging interference to other licensees holding usage rights for spectrum in the 3410–3800 range.

Licence holders are subject to the rules for synchronisation between networks.

The following procedures relate to how the 'default BEM' and the 'restrictive BEM' can be used to minimise the risk of any damaging interference to other licence holders.

3.2.3 Conditions for the default BEM

Default frame structure: The technical conditions specified in section 3.2.1.1 apply where a licence holder's base station complies with the requirements for the default frame structure described below.

- (a) Transmissions from a licensee’s base station have a frame structure that is the same as the one as shown in the figure below. The timeslots (or subframes) listed must not be used for any other purpose than downlinks (D) and uplinks (U). S refers to a special subframe. It is permitted to use TD-LTE frame configuration 2 (with a downlink to uplink ratio of 3:1) with the special subframe configuration 6 or an equivalent frame structure having transmission and reception times corresponding to that configuration.
- (b) The duration of the timeslots is one millisecond.
- (c) Licence holders are responsible for ensuring that frames are based on a uniform reference time (+/- 1.5 μ s), so that all of any licence holder’s frames are aligned equally and transmissions are consequently synchronised.

DL/UL ratio	Timeslot or Subframe number									
	0	1	2	3	4	5	6	7	8	9
3:1	D	S	U	D	D	D	S	U	D	D

Figure 4: ‘Default frame structure’

3.2.4 Conditions for the use of the restrictive BEM

Other frame structures: The technical conditions for the restrictive BEM as specified in section 3.2.1.2 are to be applied when the licence holder’s base station has another frame structure corresponding to the description below.

- (a) It is permitted to use any frame configuration not corresponding to TD-LTE frame configuration 2 (3:1) with the special subframe configuration 6 or to an equivalent frame structure having transmission and reception times corresponding to that configuration.
- (b) Licence holders should cooperate to minimise any damaging interference caused by overlapping of subframes when different technologies are used.
- (c) Licence holders using the restrictive BEM should not cause any damaging interference to other licence holders using the default frame structure (or an equivalent structure). This can be achieved through internal guard bands and/or by reducing the power of blocks next to those belonging to other licence holders who use the default frame structure (or an equivalent).

3.2.5 Small cells inside buildings

Small cells inside buildings are exempt from synchronisation. The default BEM can be used for such small cells in buildings, provided that no damaging interference occurs to other licence holders.

3.3 Start and duration of use

Art. 54 Par. 11 TKG 2003 allows spectrum to be awarded only for a specified period.

Based on existing usage rights, the licences for frequency blocks within the 3410–3600 MHz range (L01 to L19) will be awarded for the period of 1 January 2020 to 31 December 2039.

The licences for frequency blocks within the 3600–3800 MHz range (L20 to L39) will be awarded as of when the spectrum assignment decision is served to the individual licensee. The usage rights pertaining to this frequency range are also valid until 31 December 2039.

3.4 Terms and conditions of use

3.4.1 Purpose

The available frequency spectrum is to be used for “the harmonisation of the 3400–3800 MHz frequency band for terrestrial systems capable of providing electronic communications services” (also referred to within the CEPT as MFCN systems – mobile/fixed communications networks), as set out in the following publications by the European Commission:

- Commission Decision of 21 May 2008 (2008/411/EC)
- Commission Implementing Decision of 2 May 2014 (2014/276/EU)

The 3410 to 3800 MHz frequency range to be awarded is exclusively for the time division duplex (TDD) mode of operation.

3.4.2 Specific terms and conditions of use

3.4.2.1 Principal specifications

- (1) The version of the Radio Regulations adopted by the World Radiocommunication Conference (WRC-15) as well as the provisions of the Commission Decision referred to under section 3.4.1 apply in general to frequency usage.
- (2) Based on that decision, time division duplex (TDD) is the preferred duplex mode of operation in the 3400–3600 MHz sub-band, whereas the Member States may alternatively implement the frequency division duplex (FDD) mode. Due to the incompatibility of the two modes and the lack of market demand, FDD is not included in this spectrum award.
- (3) The duplex mode of operation in the 3600–3800 MHz sub-band is time division duplex (TDD).
- (4) Depending on the duplex mode of operation, these sub-band frequency limits apply: 3410–3600 MHz for TDD and 3410–3590 MHz for FDD. Where the FDD mode of operation is alternatively implemented, the duplex spacing is 100 MHz, with subscriber terminal station transmission (FDD uplink) located in the lower part of the band between 3410 MHz and 3490 MHz and base station transmission (FDD downlink) located in the upper part of the band between 3510 MHz and 3590 MHz.
- (5) Base station and subscriber terminal transmissions in the 3410–3800 frequency band must comply with the block edge mask (BEM) specified in the Annex to Council Decision 2014/276/EU.

3.4.2.2 Frequency usage in the vicinity of national and regional borders

3.4.2.2.1 General provisions

- (1) To ensure optimum power of the digital mobile broadband access systems used in cross-border areas, providers should, in compliance with the relevant annex to ECC/REC(15)01, implement the code resources given by technology as well as other radio parameters, in particular when signal centre frequencies coincide in border areas.
- (2) The limits specified under this item are potentially subject to change where possible, based on the outcome of any additional coordination procedures conducted by the telecommunications authorities in accordance with specifications that might be issued in future by European bodies and/or bilateral or multilateral agreements with the telecommunications administrative authorities of the other countries concerned.
- (3) Agreements relating to individual changes affecting areas near international borders are permitted between Austrian providers and similar providers in neighbouring countries. Such agreements nonetheless require the approval of the telecommunications administrative authorities concerned and the regulatory authority is to be notified immediately. The detailed provisions can be found in the agreements as currently amended (refer to the corresponding appendix).
- (4) Agreements relating to individual changes affecting areas near regional borders are also permitted between providers in Austria. Both the telecommunications authorities and the regulatory authority are to be notified of such agreements immediately.
- (5) When determining field strengths along borders, the calculation program specified in the most recently amended official version of the “Agreement on the co-ordination of frequencies between 29.7 MHz and 43.5 GHz for the fixed service and the land mobile service” (HCM Agreement) is definitive. The calculation program, which constitutes an integral part of these terms and conditions of use, is available from the website of the managing administration at: http://www.hcm-agreement.eu/http/englisch/verwaltung/index_europakarte.htm. The topographical data additionally required for applying the HCM program as well as the HCM Agreement 2017 are also available under that link.

3.4.2.2.2 Field strengths

- (1) Without prior coordination with the neighbouring country or region, stations implementing TDD broadband technologies in the 3410–3800 MHz range may be used if the mean field strength produced by the base station does not exceed the values listed below:
 - a) With neighbouring FDD networks and in non-synchronised TDD networks:
 - 32 dB μ V/m/5 MHz at a height of three metres above ground on the borderline
 - b) In synchronised TDD networks:
 - 67 dB μ V/m/5 MHz at a height of three metres above ground on the borderline and
 - 49 dB μ V/m/5 MHz at a height of three metres above ground at a distance of 6 km within the neighbouring country or region.

- (2) Without prior coordination with the neighbouring country or region, stations alternatively implementing FDD broadband technologies in the 3410–3590 MHz range may be used if the mean field strength produced by the base station does not exceed the values listed below:
- a) With neighbouring FDD networks and using preferential codes:
 - 67 dB μ V/m/5 MHz at a height of three metres above ground on the borderline and
 - 49 dB μ V/m/5 MHz at a height of three metres above ground at a distance of 6 km within the neighbouring country or region.
 - b) With neighbouring FDD networks and without the use of preferential codes:
 - 49 dB μ V/m/5 MHz at a height of three metres above ground on the borderline
 - c) In synchronised TDD networks:
 - 32 dB μ V/m/5 MHz at a height of three metres above ground on the borderline

Exclusive use of TDD has been specified, so that only the TDD to TDD field strength is accordingly applicable in the case of regional borders within Austria. It should also be noted that the field strengths listed above only apply in the absence of any agreement as referred to in section 3.4.2.2.1 (4).

3.4.2.3 Use restrictions based on frequency usages in Austria requiring protection

- (1) The political district of Bruck an der Mur is generally to be regarded as a protection zone for the Aflenz earth station. The absolute protection zone lies within the rectangle defined by the coordinates 15°08'09" East / 47°38'16" North and 15°30'10" East / 47°27'11" North. An absolute protection zone means that this zone must not be directly or indirectly affected by any base station transmissions for broadband services within the 3400–3800 MHz frequency range.

The absolute protection zone is shown in the figure below.

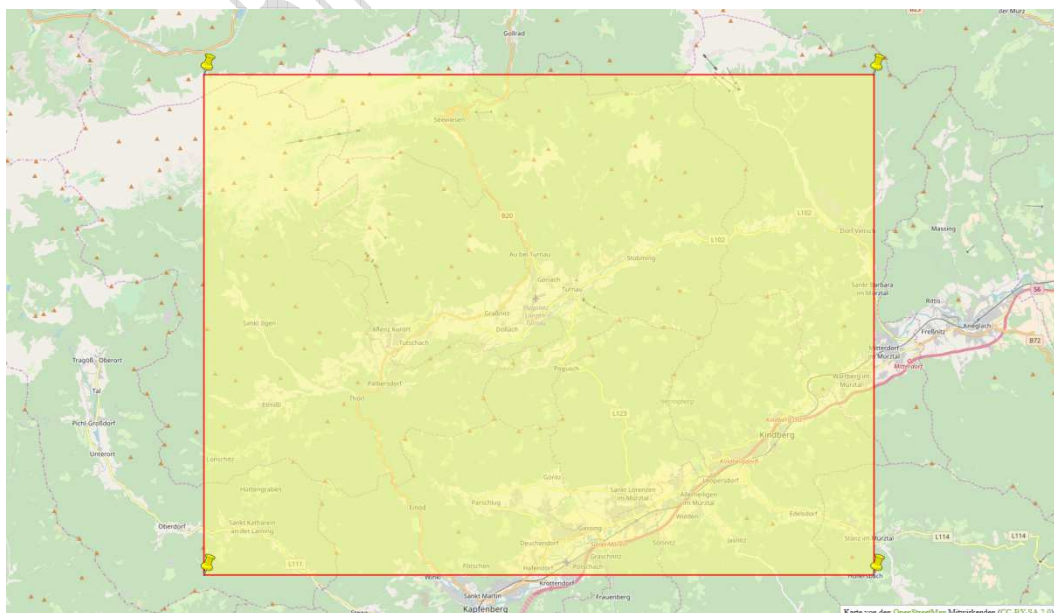


Figure 5: Absolute protection zone of the Aflenz earth station (OSM CC-BY-SA 2.0)

(2) To protect other reception stations, the power flux density of the entire 3400–3800 frequency range must not at any time exceed $-183.52 \text{ dBW/m}^2/4\text{kHz}$ at a height of 15 metres above ground, within a cylinder defined by the centre point coordinates and radii specified below:

- a) $17^{\circ}01'31.3''$ East / $48^{\circ}06'53.3''$ North, radius of 80 metres from this centre point
- b) $15^{\circ}56'12.9''$ East / $48^{\circ}10'34.3''$ North, radius of 230 metres from this centre point

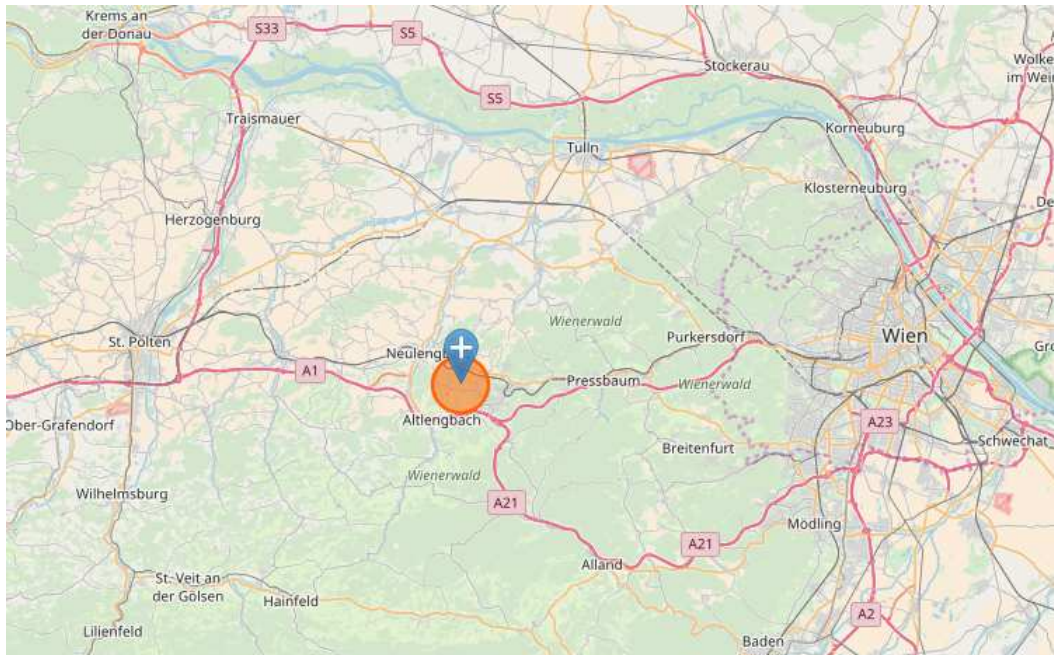


Figure 6: Protection of other receiver locations – Kohlreithberg ($15^{\circ}56'12.9''$ East / $48^{\circ}10'34.3''$ North) (OSM CC-BY-SA 2.0)

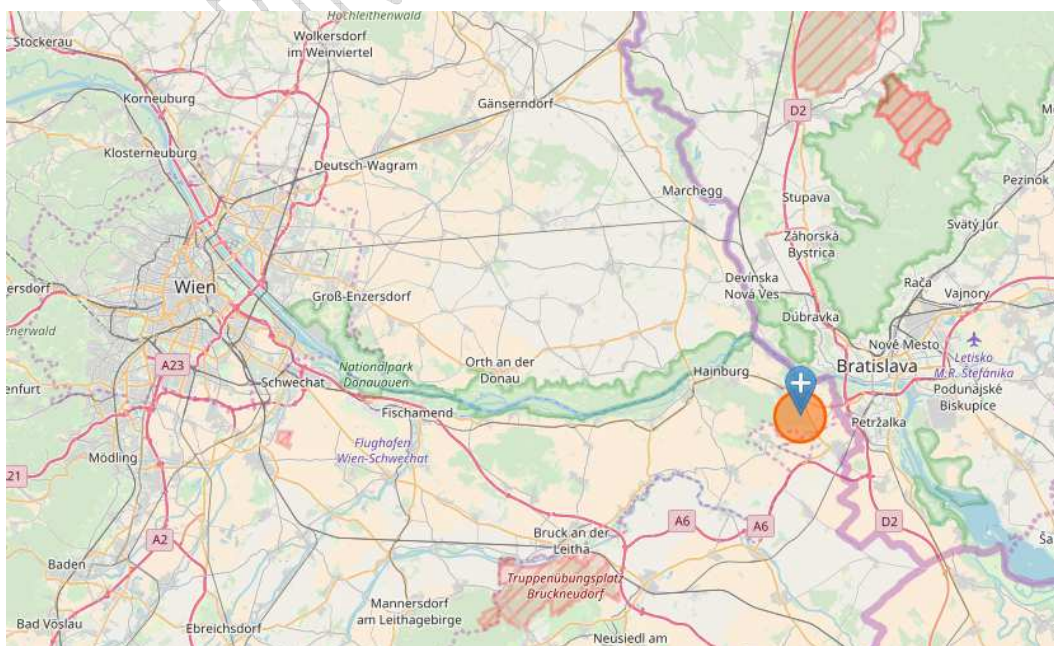




Figure 7: Protection of other receiver locations – Königswarte (17°01'31.3" East / 48°06'53.3" North) (OSM CC-BY-SA 2.0)

3.4.2.4 Changes in use and additional use restrictions

- (1) The telecommunications authorities in Austria or in other countries can order changes in use or additional use restrictions for individual frequencies or border regions, to protect existing or planned radio services.
- (2) As of the date when the agreement with Germany, Liechtenstein and Switzerland was signed, due to frequency usage in those countries, details on any corresponding protection requirements were not yet available. On receiving further details relating to protection zones, the following apply in the entire 3400–3800 MHz range:
 - a) For the protection of non-MFCN systems, a power flux density of - 122 dBW/MHz/m² must not be exceeded along the border (corresponding to a field strength of about 24 dB μ V/m/MHz).
 - b) For the protection of satellite earth stations, a power flux density of - 154 dBW/(MHz*m²) must not be exceeded along the border (corresponding to a field strength of about 16 dB μ V/m/MHz).

3.4.2.5 Quarterly report on terminal stations

The data on the base stations in operation for broadband services are to be reported on a quarterly basis to the *Frequenzbüro* (frequency office). Once the regulatory authority has awarded the spectrum, the providers will receive details of the data format from the Federal Ministry of Transport, Innovation and Technology (BMVIT).

3.4.2.6 Frequency planning and usage: other international documents

- (1) The documents listed below, issued by the Conférence Européenne des Administrations des Postes et des Télécommunications (CEPT), are also to be considered as a basis for frequency planning and usage:
 - ECC Decision ECC/DEC/(11)06
 - ECC Recommendation ECC/REC(15)01
 - CEPT Report 49
 - ECC Report 254
 - ECC Report 216
 - ECC Report 203
- (2) These documents have been published on the website of the European Communication Office at <http://www.cept.org/eco/deliverables> (under "ECO Document database") and <http://www.ecodocdb.dk/>.

3.4.2.7 Direction finder locations requiring protection

- (1) For the protection of stationary directional receiver systems operated by telecommunications authorities, at such locations the peak field strength of signals transmitted by the base stations must not exceed 105 dB μ V/m, as measured for the bandwidth of the specific system.
- (2) The current list of the direction finder locations requiring protection can be viewed (in German) in the OFB-InfoLetter 02/2012 on the website of the BMVIT under <https://www.bmvit.gv.at/ofb> (-> Publikationen -> OFB-InfoLetters).

3.5 Coverage obligations

Every spectrum holder is obliged to use the spectrum awarded in this procedure at a specified number of locations from a specified date onwards. Basic coverage is intended to ensure effective use of spectrum and prevent hoarding. The extended coverage obligation is intended to encourage rapid roll-out of 5G infrastructure, in keeping with the goals for 5G defined in the government programme (see chapter 1) and in response to the debate on Austria's 5G strategy.

Within coverage obligations, a distinction is made between basic coverage and an extended coverage obligation.

- Basic coverage: Every holder of spectrum in the 3410–3800 range is required to operate a minimum number of locations in every region for which that licensee has been assigned spectrum, with the number depending on the region (for the minimum number in each case, see section 3.5.2).
- Extended coverage obligation: A licensee holding spectrum in the 3410–3800 MHz range who has been assigned more than 90 MHz in one region is required to operate an additional number of locations depending on the particular region, while these locations need not be in the particular region in each case (for the additional number required in each case, see section 3.5.3).

3.5.1 Location as defined in terms of the coverage obligation

A location meeting the requirements listed below qualifies as a location as defined in terms of the coverage obligation:

- A location that is eligible for meeting the coverage obligation must have a base station capable of transmitting at a minimum level of 20 watts of electrical power. The actual transmission power level can be less.
- Only base stations operated outdoors are considered as locations within the meaning of this obligation.
- The spectrum holder must have actual, legal and technical control of any such base station.
- Locations as defined in terms of the coverage obligation are subject to the prohibition of active sharing set out in section 3.7. Exemption from that prohibition, as set out in section 3.7.1, is not applicable to locations as defined in terms of the coverage obligation.
- A location having an antenna system with more than one sector is still considered as only one location.
- Two locations are counted as two separate locations for the purpose of the coverage obligation only if spaced at least 25 metres apart as measured with a straight line.
- The spectrum in the 3410–3800 MHz range awarded in this procedure must be transmitted at any one location with the bandwidths specified below:

Amount of spectrum awarded	Minimum transmission bandwidth
10 MHz	5 MHz
20 MHz	5 MHz
30 MHz	15 MHz
40 MHz	25 MHz
50 MHz	35 MHz
60 MHz	45 MHz
70 MHz	55 MHz
80 MHz	65 MHz
90 MHz	75 MHz
100 MHz	85 MHz
110 MHz	95 MHz
More than 110 MHz	95 MHz

Table 3: Minimum transmission bandwidth at one location

3.5.2 Basic coverage (regardless of the amount of spectrum)

The table below lists the number of locations a licensee holding spectrum in the 3410 to 3800 MHz range is required to operate within the particular region as of the specified date as part of basic coverage:

Label	Name	Minimum number of locations by no later than 30 June 2020	Minimum number of locations by no later than 31 December 2021
A01u	Region 1 urban	18	35
A01r	Region 1 rural	13	25
A02u	Region 2 urban	18	35
A02r	Region 2 rural	13	25

A03u	Region 3 urban	18	35
A03r	Region 3 rural	13	25
A04u	Region 4 urban	18	35
A04r	Region 4 rural	13	25
A05u	Region 5 urban	18	35
A05r	Region 5 rural	13	25

Table 4: Number of locations to be operated under the basic coverage obligation

3.5.3 Extended coverage obligation (for more than 90 MHz of spectrum)

The table below lists the number of locations a licensee holding spectrum in the 3410 to 3800 MHz range is required to operate anywhere in Austria as of the specified date under the extended coverage obligation, when awarded more than 90 MHz in one region:

Label	Minimum number of locations by no later than 30 June 2020	Minimum number of locations by no later than 31 December 2021
A01u	158	315
A02u	83	165
A03u	13	25
A04u	20	40
A05u	78	155

Table 5: Number of locations to be operated under the extended coverage obligation

The examples below are intended to illustrate the coverage obligations.

Example 1:

A bidder is awarded 60 MHz in each of the regions A02u, A02r, A03u and A03r. That provider is required to operate the specified minimum number of locations in each region by no later than 30 June 2020 (or 31 December 2021). The locations must be operated in the particular region in each case.

Region	Spectrum amount	Minimum number in the region by 30 June 2020 (31 December 2021)
A02u	60 MHz	18 (35)
A02r	60 MHz	13 (25)
A03u	60 MHz	18 (35)
A03r	60 MHz	13 (25)

Table 6: Minimum number of locations to be operated based on example 1

Example 2:

A bidder is awarded 120 MHz in each of the regions A02u, A02r, A03u and A03r. That provider is required to operate at least the number of locations specified in the table below.

Label (region)	Spectrum amount	Minimum number of locations in the region by 30 June 2020 (31 December 2021)	Minimum number of additional locations by 30 June 2020 (31 December 2021)
A02u	120 MHz	18 (35)	96 (190)
A02r	120 MHz	13 (25)	
A03u	120 MHz	18 (35)	
A03r	120 MHz	13 (25)	

Table 7: Minimum number of locations to be operated based on example 2

Example 3:

A bidder is awarded 120 MHz in each of the regions A02u and A03u and 60 MHz in each of the regions A02r and A03r. That provider is required to operate at least the number of locations specified in the table below.

Label (region)	Spectrum amount	Minimum number of locations in the region by 30 June 2020 (31 December 2021)	Minimum number of additional locations by 30 June 2020 (31 December 2021)
A02u	120 MHz	18 (35)	96 (190)
A02r	60 MHz	13 (25)	
A03u	120 MHz	18 (35)	
A03r	60 MHz	13 (25)	

Table 8: Minimum number of locations to be operated based on example 3

Example 4:

A bidder is awarded 60 MHz in each of the regions A02u and A03u and 120 MHz in each of the regions A02r and A03r. That provider is required to operate at least the number of locations specified in the table below.

Label (region)	Spectrum amount	Minimum number of locations in the region by 30 June 2020 (31 December 2021)	Minimum number of additional locations by 30 June 2020 (31 December 2021)
A02u	60 MHz	18 (35)	0
A02r	120 MHz	13 (25)	
A03u	60 MHz	18 (35)	
A03r	120 MHz	13 (25)	

Table 9: Minimum number of locations to be operated based on example 4

3.5.4 Proof and verification of the coverage level

As proof of coverage, the spectrum holder is required to submit to the TTK the documents listed below in electronic form by no later than four weeks from the date specified in each case (30 June 2020 and 31 December 2021):

- An inventory of all base station locations including geo-coded data (GIS format or vector graphics), indicating in each case the frequency blocks used (per sector), based on the HCM Agreement 2017
- Operating permit(s)

The TKK is entitled to verify compliance with coverage obligations at any time by taking measurements. The spectrum holder(s) in each case are obliged to cover the costs of verification.

3.5.5 Failure to meet coverage obligations: fines

Any provider failing to meet the coverage obligations is subject to payment of a fine of EUR 10,000.00 per location not operated. The amount applies to both basic coverage as well the extended coverage obligation. The amount is payable each year as of the date specified in each case and as of the same date each year thereafter, until the provider meets the required minimum number of locations.

In the event that the awarded frequency usage rights are waived until 29 June 2020, the fine is 50 per cent of the amount payable as of the date specified for failure to meet the coverage obligation.

3.6 Obligation to disclose coverage data

Every spectrum holder is required to publish on their company website a map view showing the coverage area for the frequencies awarded in this procedure. Specifically, the map should show, by means of a realistic simulation, the data rates available to end users outdoors, broken down by downlink and uplink rates. The maximum data rate available should also be indicated. In the map view, each area supplied with service must be displayed in sectors of at least 100 m by 100 m, corresponding to the 100 m grid size used by Statistics Austria in projections of regional statistics (ETRS-LAEA grid), and show the bandwidth normally available² as well as the estimated download and upload speeds. Compliance must be given with the specified speed at every point within the particular grid.

The related raw data – at a minimum the grid, speeds and time stamp – are to be additionally made available to the public in the Open Data format (based on the CC BY 4.0 licence).

Data are to be published for the first time on 30 June 2020. The data are to be consistently kept up to date, and revised within no more than three months.

3.7 Rules for infrastructure sharing

No cooperation relating to essential core network functions is permitted between two spectrum holders in the 3410 to 3800 MHz range, where more than one of the participating licensees hold more than a total of 10% of the usage rights in the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz (1920-1980/2110-2170 MHz) and 2600 MHz frequency ranges or are affiliated under ownership law, as defined in section 5.2.2, with parties holding more than 10% of such usage rights.

² The bandwidth available to end users 95% of the day or per 24 hours; i.e. the bandwidth must not fall below this level for more than 72 minutes on any day.

Similarly, in the political municipalities of Vienna, Graz and Linz, the awarded frequency usage rights are permitted to be used exclusively with an access network and without active sharing. In addition, no joint use of active elements of the access network by an independent third-party provider is permitted.

The active elements of the access network are defined as follows for the context of infrastructure sharing: The active elements of the access network are usually operated using electrical energy and are responsible for functions including signal generation, processing and amplification, and control. This includes the transmitter, the receiver, the hardware and software that generate, control and amplify or receive and decode the radio signal, and the electronic control of the antenna tilt. Antennas requiring electrical energy are also active elements, in other words antennas with an electronic amplifier or electronic controller for alignment. Agreements allowing other providers to use active elements (e.g. national roaming agreements) are considered equivalent to active sharing.

3.7.1 Exemptions from the prohibition on active sharing

An exemption from the prohibition set out above exists where none or only one of the participating spectrum holders holds more than a total of 10% of the usage rights in the 800 MHz, 900 MHz, 1800 MHz, 2100 MHz (1920–1980/2110–2170 MHz) and 2600 MHz frequency ranges or is affiliated under ownership law, as defined in section 5.2.2, with parties holding more than 10% of such usage rights.

A further exemption from the prohibition on active sharing exists in the case of non-replicable active elements of the access network. This exemption applies only to those individual active elements of the access network which qualify as non-replicable. As far as technically and economically feasible, other third parties must on request be offered joint use of such non-replicable active elements of the access network for which exemption from the prohibition on active sharing is claimed.

3.7.2 Reporting and information obligation

By 28 February of each year at the latest, every spectrum holder is required to report to the regulatory authority any activities relating to active sharing in the previous year. Such disclosure must include the following details:

- Sharing partners
- Planned schedule for sharing
- Frequency ranges used
- Technology (e.g. 2G, 3G, 4G, 5G)
- Volume of traffic correspondingly processed in the previous year (given separately in gigabytes of uplink and downlink traffic and in minutes)
- Area supplied with coverage
- Number and position of locations
- Precise description of the active elements used jointly

The following is to be additionally given for non-replicable infrastructure in Vienna, Graz or Linz:

- Outdoor or indoor location
- Name of the party providing the mobile telecoms with space for the location
- Reason for non-replicability (cost, demand, indispensability)

Spectrum holders are additionally required to make available to the regulatory authority on request all compulsory information on active sharing in the access network, in order to enable evaluation by the regulatory authority in terms of competition regulations as well as verification of the non-replicability of any active elements of the access network in the municipalities of Vienna, Graz or Linz. In particular, any and all contractual agreements relating to active sharing are to be made available to the authority on request.

4 Principles of auction design

4.1 General information

Total spectrum of 390 MHz in the 3410 MHz to 3800 MHz range is to be auctioned off. The available spectrum, divided into blocks of 10 MHz each, will be auctioned off by region.

A draft version of the Auction Rules are provided here in Appendix E.

4.2 Minimum bid

Art. 55 Par. 4 TKG 2003 allows for the tender documentation to include details of the minimum frequency licence fee that may be bid.

These details are required to be based on the frequency assignment fees that are expected to be charged for the assigned spectrum. Where justified, the authority can depart from the rule of defining the minimum bid based on the frequency assignment fees, specifically where this appears justified considering the actual market value of the spectrum.

The following statement is taken from the explanatory comments on Art. 55 Par. 4 TKG 2003: "If the regulatory authority does not set the minimum bid based on the assignment fee, the authority is required in any case to set the bid based on national and international reference values."

Based on the principles for defining the minimum bid that can be derived from Art. 55 Par. 4 TKG 2003, the minimum bids listed below result for the principle stage, for each block of 10 MHz in the category specified in each case:

Label (region)	Minimum bid for each 10 MHz block
A01u	311,400 €
A01r	92,700 €

A02u	50,700 €
A02r	58,400 €
A03u	25,400 €
A03r	19,700 €
A04u	39,600 €
A04r	42,600 €
A05u	70,500 €
A05r	71,100 €

Table 10: Minimum bid per frequency block

4.3 Prerequisite for participating

To be allowed to participate in the auction, an applicant is required to provide security in the amount of the lowest minimum bid for a 10 MHz block in the auction (see section 4.2), in compliance with the rules in section 5.3.5 and the Auction Rules.

4.4 Spectrum restrictions

The spectrum restrictions listed below have been specified to ensure sustained competition in the markets affected by this award procedure, as well as to avoid any unfavourable asymmetric distribution of the total amount of spectrum awarded to individual market participants.

Label (region)	Spectrum cap
A01u	A1 and T-Mobile: 140 MHz All others 160 MHz
A01r	A1: 140 MHz All others 160 MHz
A02u	A1: 140 MHz All others 160 MHz
A02r	A1: 140 MHz All others 160 MHz
A03u	A1: 140 MHz All others 160 MHz
A03r	A1: 140 MHz All others 160 MHz
A04u	A1 and T-Mobile: 140 MHz All others 160 MHz

A04r	A1: 140 MHz All others 160 MHz
A05u	A1 and T-Mobile: 140 MHz All others 160 MHz
A05r	A1: 140 MHz All others 160 MHz

Table 11: Overview of the spectrum caps applying in the clock rounds

If frequency blocks remain unawarded after the last clock round and an additional bidding round is held, it is at the discretion of the auctioneer that the caps for certain or all bidders are loosened. If the auctioneer decides to loosen caps, the maximum caps listed below apply in any case to the spectrum acquired by the specified bidders during the entire principle stage (i.e. clock rounds and additional bidding round):

Region	Spectrum cap (counting the spectrum awarded in the final clock round)
A01u	A1: 160 MHz All others 190 MHz
A01r	A1: 160 MHz All others 190 MHz
A02u	A1: 160 MHz All others 190 MHz
A02r	A1: 160 MHz All others 190 MHz
A03u	A1: 160 MHz All others 190 MHz
A03r	A1: 160 MHz All others 190 MHz
A04u	A1: 160 MHz All others 190 MHz
A04r	A1: 160 MHz All others 190 MHz
A05u	A1: 160 MHz All others 190 MHz
A05r	A1: 160 MHz All others 190 MHz

Table 12: Overview of loosened spectrum caps

5 Spectrum award procedure

5.1 Steps of the procedure and timetable

As mentioned above in section 2.2, the spectrum award procedure is divided into two steps. Pursuant to Article 55 Par. 1 in conjunction with Par. 2 No. 2 TKG 2003, the first step involves verification to determine whether applicants meet the criteria set out in Art. 55 Par. 2 No. 2 TKG 2003. Any applicants not meeting the requirements in Art. 55

Par. 2 No. 2 TKG 2003 are excluded from the spectrum award procedure, as specified in Art. 55 Par. 8 TKG 2003.

The main events in the timetable for the award procedure are listed below.

Activity	Anticipated time period
Publication of the invitation to tender	June 2018
Receipt of questions	July 2018
TKK's responses to questions	End of July 2018
End of the tender submission period	August 2018
Admission to the auction	Within two weeks of the end of the tender submission period
Actual auction	October 2018
Spectrum assignment decision	Within one month of completion of the auction

Table 13: Award procedure timetable

5.2 Requirements for the award procedure

5.2.1 Legal personality of the applicant

The applicant must have legal personality and full legal capacity as defined in Art. 9 of the General Administrative Procedure Act.

5.2.2 Affiliated companies

1. Applications are not permitted if submitted by a plurality of companies that are affiliated within a company group as defined in Art. 189a No. 6 to 8 in conjunction with Art. 244 of the Austrian Commercial Code (UGB) or Art. 15 of the Stock Corporation Act (AktG) and Art. 115 of the Limited Liability Companies Act (GmbHG), or in the manner described in Art. 7 of the 2005 Cartel Act (KartG; directly or indirectly).

The same applies where applicants are otherwise affiliated in a manner allowing one applicant to directly or indirectly exercise on another applicant a significant amount of influence affecting competition (for example through trust or cooperation agreements, takeover agreements or similar, even where such an agreement has not yet been approved).

Whether significant influence affecting competition exists is subject to verification in the specific case. Such influence always exists, however, in the case of major holdings as defined in Articles 130 ff of the 2018 Stock Exchange Act (BörseG).

2. Where several companies currently active in the Austrian mobile market hold shares in one and the same company (for example a joint venture), such a company is only permitted to apply on the condition that, as required by cartel law in the individual case, any documents certifying non-objection under competition law as well as any approvals are presented, whereas the rules set out above (under 1) also apply here.

When evaluating the individual case, consideration is also to be given as to whether the applicants may currently be in the midst of a merger or demerger process. Any previous decisions by competition authorities (either at national or EU level) are especially to be considered in such cases (for example, the conditions for any merger that are specified in the approvals).

In the event that two or more applicants affiliated with one another in the manner described above apply for spectrum, only the first applicant to submit an application will be allowed to participate in the auction. Where the applications are submitted on the same day, the applicant admitted to the spectrum auction will be decided by draw.

5.2.3 Changes in the ownership structure

Regulatory authority approval is required for any change in the legal person of the applicant or any significant change in the participating interest held in the applicant (even indirectly or not immediately), which occurs during the procedure. Approval must only be given if, after completion of the change, the company is fully independent of other applicants for purposes of competition. A significant change is always to be recognised in cases where the percentage thresholds specified in Articles 130 ff of the 2018 BörseG are exceeded or where major holdings, with the exception of mere financial holdings, are initially acquired, in application by analogy of Articles 130 ff of the 2018 Stock Exchange Act. Where any change in the legal person of the applicant or any change in participating interest occurs without the TTK issuing approval, the company or companies concerned will be excluded from the award procedure.

In the application, the applicant must inform the TTK of any and all pending or anticipated procedures by cartel authorities that concern the ownership structure, submitting with the application any and all related decisions in their entirety. Any and all changes in the ownership structure that are carried out in fulfilment of such obligations, even after application is made, are to be reported to the TTK.

Regarding a change in the ownership structure of companies that have been awarded frequency usage rights in a procedure as referred to in Art. 55 TKG 2003, we refer to Art. 56 Par. 2 TKG 2003.

5.2.4 Rights to application documents

When applying for a spectrum award, the applicant irrevocably consents to unlimited use by the TTK of all information disclosed and all documents submitted as part of the application, for the purpose of the procedure and for verification of compliance with the decision as well as for all other procedures relating to frequency awards.

5.2.5 Questions concerning the Tender Document

To prepare their applications, interested parties who have paid EUR 300.00 to cover the expense of being provided with the Tender Document are entitled to participate in a question and answer session with the TTK to have any questions answered. The TTK reserves the right to decide whether to respond to any individual question.

Questions may be submitted to the TKK exclusively via the e-mail address tkfreq@rtr.at by 2018-XX-XX at 12 noon local time (date and time of receipt), giving as the subject "F 7/16 – questions concerning the tender procedure". It is planned to provide written responses to such questions by 2018-XX-XX.

The questions submitted to the TKK will be collected and forwarded, without details of the parties submitting the questions and together with the responses, to all such interested parties referred to above.

In the event that the TKK finds it necessary or helpful to clarify questions with any applicants, by submitting an application, applicants irrevocably declare their willingness to respond to any such questions within the appropriate period set by the TKK in the individual case and to subsequently submit any information requested.

5.2.6 Information collection– advisors

For the purpose of collecting information and making enquiries for this tender procedure, the TKK can request support from advisors (Art. 55 Par. 11 TKG 2003). This may concern the collection of information related to Tender Document questions as referred to above in section 5.2.5 or related to the verification of eligibility criteria as referred to in Art. 55 Par. 2 No. 2 TKG 2003, as well as support in the auction procedure, while this list is by no means exhaustive.

5.2.7 Examination of files

All applicants are to be granted access to an equal scope of all files on request. Those parts of files are excluded from the right to examination where disclosure would harm the justified interests of a party to the procedure or a third party or would jeopardise the activities of the authority or interfere with the purpose of the procedure. To refuse the examination of files to a party against which a procedure is pending, a procedural order is issued in accordance with Art. 17 Par. 4 of the General Administrative Procedure Act.

The TKK is aware that a large volume of the information made available in this procedure could, if released for examination, harm the justified interests of a party in the procedure or a third party. Similarly, some of the information contained in the procedure has the potential of jeopardising the activities of the authority or interfering with the purpose of the procedure, were such information to be examined by parties to the procedure. The TKK consequently reserves the right to exclude such parts of files from the right to examination.

Considering the possibility of collusive behaviour, the TKK assumes in particular that disclosure of the applicants prior to completion of the auction could interfere with the purpose of the procedure. The TKK will therefore refrain from disclosing the applicants; not even via the right to examine files will this information be available prior to completion of the auction. After completion of the auction, the applicants will be provided with access to all information, while taking into account any business and trade secrets.

To ensure confidentiality of any sensitive information made available, applicants should indicate in their applications those data that they consider to be business and trade secrets. An additional abridged version of the application, with any business and trade secrets removed and clearly marked as an abridged version, is to be submitted. The TKK additionally reserves the right to exclude any other parts of files from the right to examination, in accordance with Art. 17 Par. 3 of the General Administrative Procedure Act. The TKK also reserves the right to make available for examination any parts of files labelled by applicants as business and trade secrets, if such disclosure is not expected to harm the justified interests of a party to the procedure or of third parties or to jeopardise the activities of the authorities.

Reference is made in this context to Art. 125 TKG 2003 and to ruling No. 2002/03/0273 of 25 February 2004 by the Administrative Court concerning business and trade secrets.

The applicants are obliged to use any information concerning other applicants that is obtained through this procedure only for the purpose of the procedure and to refrain from disclosing such information.

5.2.8 Publication

The TKK will publish the results of the auction on the regulatory authority's website.

5.3 Information in the application

Art. 55 Par. 1 TKG 2003 requires the regulatory authority to assign the frequencies entrusted to the authority to that applicant who meets the general requirements set out in Par. 2 No. 2 of that Article.

To evaluate whether the requirements set out in Art. 55 Par. 2 No. 2 TKG 2003 have been met, insight into the applicant's organisation is necessary (among other things). The information provided by the applicant must include details of the legal and financial situation and of the ownership structure.

5.3.1 Information on the applicant

The application documents must include the information on the applicant listed below (where applicable):

- a) name (company name), place of establishment (address), date and place of founding, including current excerpt from the Austrian Commercial Register or from the comparable register of the country of establishment;
- b) type and quantity of capital shares, nominal value of the capital shares, and the voting and dividend rights tied to any and all types of shares;
- c) subscribed capital for each type of capital shares as well as precise information on the shareholders as of the date when the application is submitted, as well as any and all anticipated changes in this regard;
- d) quantity, value and rights (including exchange rights) in relation to any and all options, certificates of entitlement, preferred shares and debt capital, as well as any other securities issued by the applicant;
- e) currently amended version of the articles of association;

- f) description of the business activities;
- g) name of the person meeting the requirements under Art. 9 of the Service of Documents Act (*Zustellgesetz*) who is authorised by the applicant to accept service of documents, as well as the person's phone and fax numbers and postal and e-mail addresses (see also section 5.3.8);
- h) all other issues that, if disclosed or kept secret, could significantly influence the TKK's decision when carrying out verification as referred to in Art. 55 Par. 2 No. 2 TKG 2003 prior to the assignment of spectrum.

Any details listed above that are not provided in full will be subsequently requested by the TKK, if the authority deems the information necessary for determining the facts relevant for the decision. The TKK will request additional information in this context, if the authority deems the information necessary for determining the facts relevant for the decision.

5.3.2 Information on the applicant's owners, shareholders and similar items

The applicant is required to provide the details listed under section 5.3.1 items a) to d) and f) and h) (where applicable) for every owner or shareholder as well as every owner of options, certificates of entitlement, preferred shares, debt capital or other types of securities issued by the applicant. The following is also to be provided for every such person with an entitlement:

- i) relationship with the applicant (e.g. quantity and type of the capital shares or securities held); any trust or consortium agreements;
- j) where existing: parent company or companies of the group, higher-level company or companies in the group.

In the event that individuals hold any capital shares or other securities issued by the applicant in a trustee or similar capacity on behalf of a third party, this circumstance must be indicated and the details listed above provided for the actual beneficial owner.

5.3.3 Higher-level companies with major holdings: additional description of the ownership structure

In the event that, without directly holding shares in the applicant, several higher-level companies have holdings in the applicant (i.e. owners, shareholders, owners of options, certificates of entitlement, preferred shares, debt capital or other types of securities issued by the applicant) and these companies together hold (based on the ultimate owner) an effective total participating interest of 25% or more in the applicant, a description of such holdings must be provided in the application.

Specifically, the items of information listed in section 5.3.2 of this Tender Document are to be provided for every company that has effective participating interest of at least 25% in the applicant – regardless of the higher level at which these shares are held.

Thus, the information specified under section 5.3.2 of this Tender Document must also be provided for any companies that do not reach participating interest of 25% in the applicant through concrete holdings in a company at a level above the applicant but as a

result of adding together the participating interest held in several companies at any level above the applicant.

In the event that individuals hold any capital shares or other securities issued by the applicant that equal a participating interest of at least 25% in a trustee or similar capacity on behalf of a third party – even if held indirectly by means of participating interests at a higher level – this circumstance must be indicated and the details listed above provided for the actual beneficial owner.

The details required under this section can be illustrated using tables or charts showing the participating interests held directly and indirectly as well as the type of control over the applicant, in particular the type of holding. When providing a description of the linked participating interests, care should be taken to ensure that the TKK is able to identify any business interrelationships that would allow one applicant to directly or indirectly exercise on another applicant a significant amount of influence affecting competition.

Any details listed above that are not provided in full will be subsequently requested by the TKK, if the authority deems the information necessary for determining the facts relevant for the decision. The TKK will request additional information in this context, if the authority deems the information necessary for determining the facts relevant for the decision.

5.3.4 Information on consortia

The additional items of information listed below are required in the case of a consortium or joint venture:

The type of relationship between the members, in addition to precise details of any of the following:

- Trust agreements, consortium agreements
- Joint venture agreements
- Declarations of intent
- Ownership agreements

In addition, the same details as listed under section 5.3.2 are required for the members of the consortium and are to be included with the application.

Any details listed above that are not provided in full will be subsequently requested by the TKK, if the authority deems the information necessary for determining the facts relevant for the decision. The TKK will request additional information in this context, if the authority deems the information necessary for determining the facts relevant for the decision.

5.3.5 Bank guarantee

Applicants must provide security equalling 50% of the bids submitted in the principle stage. Such security must be provided by means of an abstract bank guarantee which is

callable on first demand and has been issued by a bank with a good credit rating that is established in a signatory country of the European Economic Area (EEA; see Appendix B for a sample bank guarantee).

The minimum amount of the bank guarantee is determined based on the minimum bid set for the least costly 10 MHz block (see Table 10). The original of that bank guarantee must be supplied with the application.

The following rules apply to security for bids submitted in the principle stage of the auction:

- The minimum amount of security is determined from Table 10 (section 4.2).
- The amount of any clock bid submitted in the clock rounds, in other words the sum of the clock prices bid for all of the blocks demanded, must not exceed 200% of the security put up by the bidder.
- The prices of all bids submitted in the additional bidding round and the winning price of the blocks awarded after the last clock round must in total not exceed 200% of the security put up by the bidder.

It is also possible to present additional bank guarantees during the auction.

In the event that bank guarantees are presented later during the auction, to allow the necessary checks, such guarantees must be presented by no later than 12:00 noon (local time) of the business day (Monday to Friday) prior to submitting the bid and must have been issued by the same bank that issued the guarantee supplied with the application.

As the sole condition for becoming effective, any bank guarantee must specify the award of the spectrum designated in this tender procedure by official decision to the applicant. The guarantee must designate the Republic of Austria (the federal government) as the beneficiary and be valid for at least the period of 2018-XX-XX to 201X-XX-XX. Any additional bank guarantee provided later must be valid from the date of presentation until at least 201X-XX-XX.

No bank guarantee is required as security for the assignment stage.

The TKK reserves the right to demand additional bank guarantees or other security without specifying grounds.

On completion of the procedure, the bank guarantees provided by those applicants who are not awarded the requested spectrum will be returned to them. The bank guarantees provided by those applicants who are awarded spectrum in this tender procedure will be returned to them after full payment of the frequency licence fee.

5.3.6 Information on technical capabilities, service quality and coverage obligation

As stated in Art. 55 Par. 2 No. 2 TKG 2003, grounds must not exist for assuming that the proposed service will not be provided, in particular with regard to level of quality and fulfilment of the coverage obligation. The applicant must furthermore have the

necessary technical capabilities. The information requested in the sections below is intended to allow verification of meeting these requirements.

The applicant is obliged to provide evidence of meeting the necessary requirements.

Evidence must include at least the following details:

- Description of planned spectrum use (e.g. services, technologies, data transmission rates, quality and availability)
- Planned coverage (supply of services) over the entire licence term
- Number of locations over the entire licence term
- Capabilities and expertise in the planning and operation of wireless networks

5.3.7 Information on financial strength

The applicant is required to provide evidence of having the financial resources necessary for setting up and operating a wireless network.

The application documents are to specifically include information as follows:

5.3.7.1 Business plan/balance sheet

Every applicant is required to prepare a business plan for the field of business (or fields of business) in which the applicant plans to use the requested spectrum, with the plan based on the applicant's strategy, market assessment and forecast of business operations for the three years following initial use of the frequencies in each case.

The applicant is free to structure the business plan. The breakdown should, however, show the following information:

- Which services are to be offered in this frequency range?
- Which technologies will be implemented to provide those services?
- As of which date will the services be offered?

5.3.7.2 Financing

Every applicant is also required to describe how the frequency licence fee is to be funded. This must be in accordance with the operator's financial capabilities. The following details are correspondingly required:

- Equity financing – schedule for and raising of equity capital, including any plans for issuing share capital
- Debt financing – credit lines, security made available, and the repayment terms and borrowers for any and all loans during the first four years after spectrum award

5.3.8 Authorised recipient

When applying for assignment, natural persons not having their main residence in Austria or legal persons not established in Austria are required to designate an authorised recipient as defined in Art. 9 of the Service of Documents Act, Federal Law

Gazette (FLG) No. 200/1982 as amended by FLG I No. 40/2017 (see section 5.3.1). The application must include a declaration bearing the authorised company signature which designates a recipient with unlimited authorisation to accept service of documents. A new unlimited authorisation is to be submitted immediately upon any change of recipient.

5.3.9 Application form

The application form (see Appendix A) must also be completed, signed and submitted.

5.3.10 Declaration of completeness

Any duly completed application in writing is required to include the information requested under section 5.3. A declaration of completeness (Appendix D) is also required to be enclosed with the application, confirming that all information required by this Tender Document as well as all information relevant for evaluation of the case by the TKK is complete and correct as included in the application.

5.4 Submission of the spectrum award application

Spectrum award applications are to be addressed to:

Telekom-Control-Kommission
Mariahilfer Straße 77–79
1060 Vienna
Austria

The TKK must receive the complete spectrum award application, in a sealed package (e.g. envelope or parcel) labelled “F 7/16 – Spectrum Award Application”, by 2018-XX-XX 12:00 noon (local time). Any applications received after that time will not be considered. The spectrum award application can be delivered by postal or courier service or submitted in person. If submitted in person, it is necessary to request an appointment. Appointments can be requested by sending an e-mail to tkfreq@rtr.at no later than 12:00 noon of the day preceding the requested appointment. Appointment requests as well as submissions can be made only on business days (Monday to Friday).

The original spectrum award application must be submitted in printed form in German and be accompanied by an electronic copy (e.g. on a USB flash drive). Any required supplements such as business reports and maps may also be in English.

Changes to applications or withdrawal of applications are not permitted after expiry of the tender submission period (Art. 55 Par. 6 TKG 2003).

5.5 Application document check list

The spectrum award application is to be structured as listed below:

- Application form (see Appendix A)
- Information on organisational structure

- Information on technical capabilities, service quality and coverage obligation (see section 5.3.6)
- Information on financial strength (see section 5.3.7)
- Bank guarantee (see sample in Appendix B)
- Authorisation to accept service (see section 5.3.8, sample in Appendix C)
- Declaration of completeness (see section 5.3.10, sample in Appendix D)

6 Costs and fees

6.1 Frequency licence fee

The successful applicants are required to deposit the frequency licence fee, as determined in the auction procedure, within four weeks of being served the spectrum assignment decision.

The frequency licence fee does not include value-added tax.

The spectrum award becomes void if the frequency licence fee is not paid (in full and on schedule). Notwithstanding this circumstance, the Republic of Austria is entitled in such a case to call on the bank guarantee or to collect the unpaid portion of the frequency licence fee by administrative execution.

6.2 Frequency usage fee

Art. 82 TKG 2003 specifies frequency usage fees for the use of spectrum, among other things. The levels of such fees are set out in the Telecommunications Fee Ordinance (*Telekommunikationsgebührenverordnung, TKGV*), FLG II No. 29/1998 as amended by FLG II no. 108/2011. The fees are prescribed by the telecommunications offices as part of issuing operating permits.

6.3 Consulting expenses

The regulatory authority is entitled to consult experts and advisors at any stage of the procedure. The fees for such consultants as well as their additional cash expenses are required to be paid by the applicant awarded the spectrum in the particular case. In the case of more than one applicant, the expenses are divided up on a pro-rated basis among the applicants awarded spectrum.

These expenses are prescribed in the spectrum assignment decision and are due for payment within four weeks of being served the decision.

A. Application form

Application form in the procedure for spectrum award in the 3410 to 3800 MHz range

Applicant:

Address:

Security

Security in the amount of EUR _____ (in words

_____) in the form of an original bank guarantee is enclosed with the application.

B. Sample bank guarantee

Name of bank:

Address:

Republic of Austria
c/o Telekom-Control-Kommission
Mariahilfer Straße 77–79
1060 Vienna

Guarantee number _____

(Bank) XX hereby provides to the Republic of Austria the irrevocable guarantee declaration described in the following:

It is known to the bank that (company) _____ is applying for spectrum award in the 3410 to 3800 MHz range within the framework of the tender procedure currently being conducted. As stipulated in section 5.3.5 of the Tender Document of 2018-XX-XX, (company) _____ is required, as security for the requested bidding eligibility, to submit with its application an abstract bank guarantee issued by a bank with a good credit rating that is established in a signatory country of the European Economic Area.

(Bank) hereby guarantees payment to the Republic of Austria of a total amount up to the maximum specified below, without verification of the underlying legal relationship and under waiver of any and all objections:

EUR XX
(in words: XX euros)

Payment will be made to your designated bank account on first demand in writing, on condition that spectrum has been awarded to (company) XX based on this tender procedure. Confirmation of the fact in your written demand will be considered as proof that the condition has been met.

This guarantee cannot be used prior to 2018-XX-XX.

This guarantee expires automatically when this deed is returned to us and by no later than XX XXXX 201X even if not returned, unless you make use of the deed by means of a letter (sent by registered mail or by courier) which we receive by no later than that date.



Any claims under this guarantee can be assigned, pledged or restricted in transferability for the benefit of third parties only with our express consent.

Date

(authorised company signature)

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C. Sample authorisation to accept service

Authorisation to accept service

(Company) XX hereby authorises XXX to accept any and all correspondence in Procedure F 7/16 for spectrum award in the 3410 to 3800 MHz range.

Contact details of Ms./Mr. NAME XX XXX:

Street
Postal code, city or town
Phone +43...
Fax +43...
E-mail@....

Date

(authorised company signature)

D. Sample declaration of completeness

To:
Telekom-Control-Kommission
Mariahilfer Straße 77–79
1060 Vienna
Austria

Name and address of the applicant

Application in F 7/16 – declaration of completeness

The applicant hereby declares the following:

The enclosed application contains in complete and true form the information and documents which are requested in the Tender Document for Procedure F 7/16 and are otherwise necessary for evaluating the application in the spectrum award procedure based on the criteria set out in provisions of European Union law as well as applicable Austrian law and in particular the 2003 Telecommunications Act (TKG 2003), even where such information or documents are not expressly requested in the Tender Document.

In particular, except for those disclosed in the application, no agreements, collateral agreements or other relevant circumstances relating to

- ownership of the applicant,
- planned financing or
- the business plan

exist that could influence evaluation of the application.

Date

(authorised company signature)

E. Draft Auction Rules

The draft Auction Rules are separately available for downloading.

NON BINDING TRANSLATION

F. Appendices to the terms and conditions of use (proposal)

F.1 Appendix: Commission Decision of 21 May 2008 (2008/411/EC)

F.2 Appendix: Commission Implementing Decision of 2 May 2014 (2014/276/EU)

F.3 Appendix: Agreement on 3400–3800 MHz (Austria, Germany, Liechtenstein and Switzerland)

F.4 Appendix: Agreement on 3400–3800 MHz (Austria, Croatia, Hungary, Serbia, Slovak Republic, Slovenia; in English)

The appendices on the terms and conditions of use are available separately for downloading.

G. Regional structure – classification of municipalities

Urban regions 1 to 5

Urban region 1

Region	Province	Municipality ID	Municipality
A01u	Vienna	90001	Vienna
	Lower Austria	30201	St. Pölten
		30740	Schwechat
		31214	Langenzersdorf
		31704	Brunn am Gebirge
		31716	Maria Enzersdorf
		31717	Mödling
		31719	Perchtoldsdorf
		31723	Vösendorf
		31725	Wiener Neudorf

Table 14: Municipalities in urban region 1



Figure 8: Urban region 1 –St. Pölten



Figure 9: Urban region 1 – Vienna and selected neighbouring municipalities

Urban region 2

Region	Province	Municipality ID	Municipality
A02u	Upper Austria	40101	Linz
		40301	Wels
		41012	Leonding
		41017	Pasching
		41021	Traun
		41823	Thalheim bei Wels

Table 15: Municipalities in urban region 2

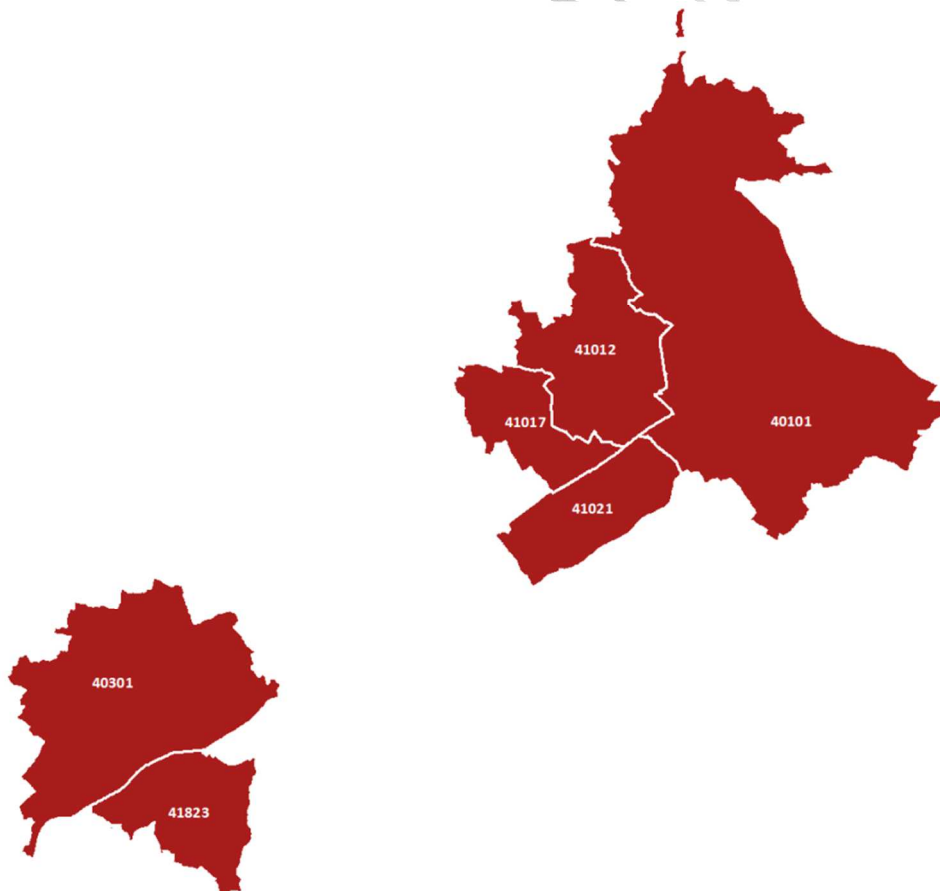


Figure 10: Urban region 2 – Linz and Wels and selected neighbouring municipalities

Urban region 3

Region	Province	Municipality ID	Municipality
A03u	Salzburg	50101	Salzburg
		50338	Wals-Siezenheim

Table 16: Municipalities in urban region 3



Figure 11: Urban region 3 – Salzburg and Wals-Siezenheim

Urban region 4

Region	Province	Municipality ID	Municipality
A04u	North Tyrol	70101	Innsbruck
		70346	Rum
	Vorarlberg	80207	Bregenz
		80215	Hard
		80220	Kennelbach
		80224	Lauterach
		80235	Schwarzach
		80240	Wolfurt
		80301	Dornbirn

Table 17: Municipalities in urban region 4

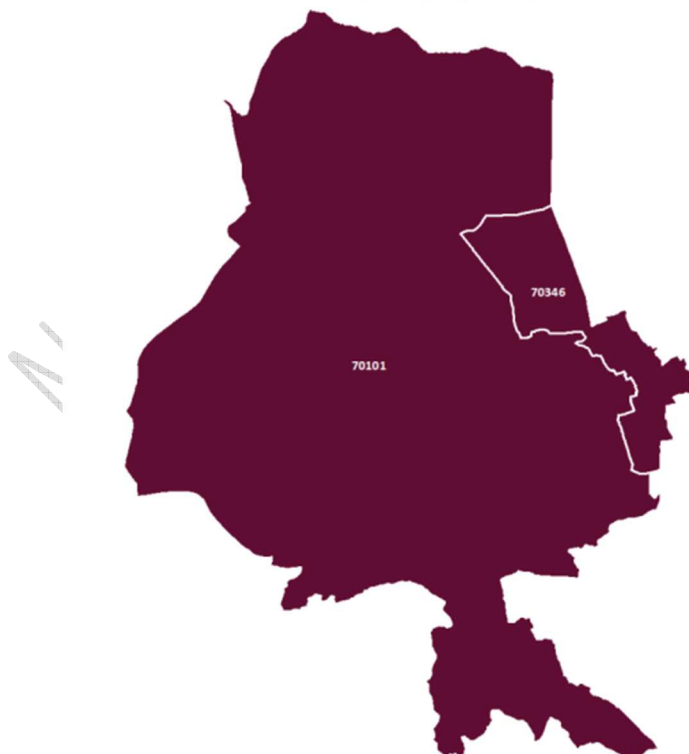


Figure 12: Urban region 4 – Innsbruck and Rum



Figure 13: Urban region 4 – Bregenz and selected neighbouring municipalities

Urban region 5

Region	Province	Municipality ID	Municipality
A05u	Carinthia	20101	Klagenfurt am Wörthersee
		20201	Villach
	Styria	60101	Graz
		60608	Feldkirchen bei Graz
		60669	Seiersberg-Pirka

Table 18: Municipalities in urban region 5



Figure 14: Urban region 5 – Villach and Klagenfurt



Figure 15: Urban region 5 – Graz and selected neighbouring municipalities

Rural regions 1 to 5

Rural regions	Scope (territory)
A01r	Lower Austria and Burgenland except for the municipalities classified under region A01u
A02r	Upper Austria except for the municipalities classified under region A02u
A03r	Salzburg except for the municipalities classified under region A03u
A04r	North Tyrol and Vorarlberg except for the municipalities classified under region A04u
A05r	Carinthia and Styria except for the municipalities classified under region A05u

Table 19: Rural regions 1 to 5

H. Sample notification of a bidder alliance for the assignment stage

To:
Telekom-Control-Kommission
Mariahilfer Straße 77–79
1060 Vienna
Austria

Names and addresses of the bidders providing notification of the intent to form a bidder alliance for the assignment stage

Notification of the intent to form a bidder alliance for the assignment stage

The bidders providing notification declare as follows:

We hereby notify the TKK of the intent to form a bidder alliance. The corresponding prerequisites as defined in section 2.3.1 of the Tender Document have been met.

The following bidders are joining to form a bidder alliance for the assignment stage:

-
-
-
-
-

The following member is nominated as leading member of the bidder alliance:

-

.....
Date

.....
(authorised company signatures of all bidders participating in the bidder alliance specified here)