

Spectrum Licensing Best Practice Austria

Innovative 700 MHz assignment auction to boost coverage in under- served communities



Key lessons

- **Austrian regulator RTR successfully awarded all available spectrum and obtained coverage commitments for over 80% of its targeted under-served communities.**
- **One goal of awarding 700 MHz was to further improve mobile coverage, as an important step towards gigabit networks.**
- **The award included an innovative two-stage approach to auctioning coverage obligations:**
 - **In the first stage, winning bidders for each 700 MHz lot had to commit to providing coverage to 150 under-served communities.**
 - **In the second stage, bidders could voluntarily commit to cover additional communities in exchange for a bid discount.**

Background

In March 2020, Austrian regulator RTR auctioned spectrum in the 700 MHz, 1500 MHz, and 2100 MHz bands. An explicit goal of the award was to utilise the 700 MHz band to provide the best possible mobile coverage, which the RTR saw as an important interim step towards providing access to gigabit networks.

2100 under-served communities were identified as targets for such coverage improvements by the RTR in the auction. The RTR defined two stages in the auction to cover the communities. In Stage 1, winning bidders of each 2x5 MHz lot of 700 MHz spectrum had to commit to providing coverage to 150 communities. In the second stage, all operators (including those not acquiring 700 MHz) could bid to cover additional communities in exchange for payment discounts applying to their Stage 1 winning prices.

The three national mobile operators, T-Mobile, A1 and Three, participated in the auction. All available spectrum in the 700 MHz, 1500 MHz and 2100 MHz was assigned in Stage 1 of the auction. In the 700 MHz band, T-Mobile acquired 2x20 MHz and 600 community coverage commitments, and Three acquired 2x10 MHz and 300 community coverage commitments. In the second stage, an additional 802 communities were allocated across all three operators, including A1.

In total, the RTR was successful in auctioning 1702 (>80%) of the available 2100 communities across the two stages of the auction.

Auction design and implementation

The coverage obligations were awarded using a two-stage approach.

In Stage 1, a unique list of 350 communities was attached to each of the six 700 MHz lots. A winning bidder had to select 150 communities out of this list as its coverage commitment. A bidder winning multiple lots could not pick more than 150 communities from each list. Operators were required to serve 50% of the communities awarded in Stage 1 by the end of 2023, and the remainder by the end of 2025.

In Stage 2, operators could bid to cover unallocated communities from Stage 1 in exchange for a discount on their total bids. Stage 2 utilised a single-round

sealed bid process. Bidders submitted a list of multiple potential coverage commitments, which specified how many additional communities they were willing to serve in exchange for a bid discount. The RTR then evaluated all bid combinations and selected exactly one set of coverage commitments from each bidder, such that the winning combination of bid discounts did not exceed the RTR's (undisclosed) maximum discount levels, whilst the number of covered communities was maximised.

The selection of the additional communities from Stage 2 followed a 'first-come first-served' approach after the auction, with the RTR making additional online tools available to help with the selection process.



Lower prices in exchange for obligations to support investment



Flexibility in choosing coverage commitments was beneficial



Effective coverage obligations require careful definition

Final impact

By offering bidders in Stage 1 to select 150 communities from a larger list of 350 communities, the RTR significantly reduced the risk of specific lots becoming less attractive due to cost asymmetries between lists and bidders. Operators could assess relative coverage cost individually and then select the most economically advantageous communities and lots given their network rollout. This worked well in the auction, as all 700 MHz lots were awarded.

As of October 2024, 713 of the 1702 communities were covered. Progress on achieving the coverage targets has been hampered by ambiguity in the auction rules on the measurement process for validating coverage – a topic which industry and the RTR are currently

aiming to resolve. In addition, it is our understanding that communities were not informed of their inclusion in the list, with some communities showing resistance to deployments. These obstacles highlight important administrative aspects of awarding coverage obligations.

However, the overall process worked effectively. By allowing operators to pick from a list of communities and bid for further communities in exchange for a bid discount, the RTR reduced uncertainty for operators and provided incentives for coverage expansion. Ultimately, all available spectrum and over 80% of the target communities were awarded.