

# 5G

## 5G Auctions in CEE

- Q1:** Are any frequencies suitable for 5G already allocated?  
**Q2:** Are auctions for any frequencies suitable for 5G currently announced or expected?  
**Q3:** What is the stage of current 5G auctions? What will be the auction method?  
**Q4:** Have any operators already launched commercial 5G?

### Czech Republic







<b>Q1</b>	700 MHz, 3.4-3.6 GHz and 3.6-3.8 GHz
<b>Q2</b>	All frequencies have been allocated.
<b>Q3</b>	<p>The auction of 700 MHz and 3.4-3.6 GHz frequencies has been completed. The auctioned frequencies were distributed between five participants (<a href="#">auction terms</a>; <a href="#">auction results</a>):</p> <ul style="list-style-type: none"> <li>• T-Mobile Czech Republic a.s. was awarded the 2x10 MHz auction block in the 700 MHz band, reserved for a new market entrant, as well as three 20 MHz blocks in the 3.4-3.6 GHz band;</li> <li>• O2 Czech Republic a.s. was awarded the 2x10 MHz auction block in the 700 MHz band, with a proviso of adhering to national roaming stipulations and the provision of PPDR services, as well as one 20 MHz auction block in the 3.4-3.6 GHz band;</li> <li>• Vodafone was awarded two 2x5 MHz blocks in the 700 MHz frequency band and one 20 MHz block in the 3.4-3.6 GHz band;</li> <li>• CentroNet, a.s. was awarded four 20 MHz auction blocks in the 3.4-3.6 GHz band; and</li> <li>• Nordic Telecom 5G a.s. was awarded one 20 MHz block in the 3.4-3.6 GHz band.</li> </ul> <p>The proceeds from the auction totalled around EUR 212 million</p>
<b>Q4</b>	Commercial 5G launched by all three major mobile operators – O2, Vodafone and T-Mobile – on frequencies already held.

### Slovakia

<b>Q1</b>	700 MHz, 1800 MHz, 900 MHz 3.4–3.8 GHz
<b>Q2</b>	All frequencies have been allocated.
<b>Q3</b>	<p>The auction of 700 MHz, 900 MHz and 1800 MHz frequencies has been completed. The auctioned frequencies were distributed between four participants (<a href="#">auction terms for 700 MHz and 900 MHz</a>; <a href="#">auction terms for 1800 MHz</a>):</p> <ul style="list-style-type: none"> <li>• Orange Slovensko, O2 Slovakia and Slovak Telekom were awarded the 2x10 MHz auction block in the 700 MHz band.</li> <li>• O2 Slovakia was awarded the 2x4,2 MHz auction block in the 900 MHz band.</li> <li>• O2 Slovakia, Slovak Telekom and SWAN Mobile, were awarded the 2x3 MHz auction block in the 1800 MHz band.</li> </ul> <p>The total amount that the state received for the offered frequencies is EUR 100,229,000.</p>
<b>Q4</b>	Commercial 5G launched by two major mobile operators – O2 and 4ka – on frequencies already held.

### Hungary

<b>Q1</b>	700 MHz, 2100 MHz, 2600 MHz and 3600 MHz
<b>Q2</b>	All frequencies have been allocated.
<b>Q3</b>	<p>The sale has been completed. In the 700 MHz frequency band, intense competition developed between service providers, while in the 2600 MHz band, no service provider submitted a bid.</p> <p>The frequencies have been allocated as follows:</p> <ul style="list-style-type: none"> <li>• Telekom Hungary received 2x10 MHz at frequency 700 MHz, 2x10 MHz at frequency 2100 MHz, 120 MHz at frequency 3600 MHz.</li> <li>• Telenor received 2x5 MHz at frequency 700 MHz, 140 MHz at frequency 3600 MHz.</li> <li>• Vodafone received 2x10 MHz at frequency 700 MHz, 2x5 MHz at frequency 2100 MHz, 50 MHz at frequency 3600 MHz.</li> </ul>
<b>Q4</b>	Commercial 5G launched by Vodafone and Telekom Hungary on frequencies already held.

 Romania	
Q1	None yet.
Q2	700 MHz, 800 MHz, 1500 MHz, 2600 MHz and 3400-3800 MHz
Q3	5G auctions are yet to be announced. The implementation of 5G technology has been postponed in Romania due to the lack of a Government Decision establishing the minimum starting prices of the auction and the payment schedule, as well as of a document clarifying and transposing the Government Memorandum with the US on the security of 5G networks. It is estimated that the auctions will take place in the beginning of 2021.
Q4	None yet.
 Bulgaria	
Q1	None yet.
Q2	700 MHz, 800 MHz, 3.6 GHz; 2600 MHz (potential)
Q3	5G auctions are yet to be announced. It is envisioned for the auctions (or other ways of distributing the frequencies) to be announced in the beginning of 2021.
Q4	In September 2020 the Bulgarian Telecommunications Company (BTC) EAD (commercial name: Vivacom) launched 5G services with limited coverage. In November, A1 launched its own 5G service in Sofia, promising that by March 2021 it will cover all Bulgarian towns with more than 10,000 inhabitants.
 Serbia	
Q1	None yet.
Q2	2500–2690 MHz; 3.4-3.8 GHz; 694-790 MHz (expected soon)
Q3	5G auctions are yet to be announced. The first auction was initially planned for the last quarter of 2020. However, it has been postponed due to COVID-19 situation and current financial position of operators. According to the Ministry of Trade, Tourism and Telecommunications, it is expected that the auction will be held in 2021, i.e. following the improvement of the operators' financial situation.
Q4	None yet.
 Ukraine	
Q1	None yet.
Q2	700 MHz and 3.4-3.8 GHz bands.
Q3	The Government plans to announce tenders for 700 MHz and 3.4-3.8 GHz bands in October 2021. Ukrainian Parliament is currently working on a Bill on Electronic Communications 3014 that will permit the leases of frequency spectrum and shared use of frequencies and equipment in line with the EU practices. If adopted, the law should make the implementation of the 5G technology smoother.
Q4	None yet.
 Turkey	
Q1	None yet.
Q2	The suitable frequencies are currently being tested.
Q3	5G auctions are yet to be announced. The regulatory body has granted permission for 5G testing to the 4G operators in the three largest cities in Turkey. In this respect, Turkcell will conduct tests in Istanbul and Izmir within the 3.5 and 26 GHz frequency bands, Vodafone will conduct tests in Istanbul and Ankara within the 3.5 and 3.7 GHz frequency bands, while Turk Telekom Mobile will conduct tests in Istanbul within the 3.5 GHz frequency band. According to the announcements made by government officials, Turkey aims to develop its domestic infrastructure for 5G technology before launching an auction for 5G.
Q4	Testing operation only.
 Kazakhstan	
Q1	None yet.
Q2	3.6-3.9 GHz
Q3	5G auctions are yet to be announced.
Q4	None yet.