



## 5G TECHNOLOGY RADIO FREQUENCIES BID

### WHAT DID THE TCU AUDIT?

Analysis of the pricing studies and the legal and technical aspects of the draft tender notice for the bid for radio frequencies associated with the provision of the 5G mobile telephony service, including the scope and financial commitments established for the winners.

The frequency bands were priced using programming code developed by Anatel in Python language, and not in spreadsheets, as is usually the case, since the complexity and volume of processing required to model the various business plans included in the bidding process made its use unfeasible.

The scope of the analysis was the pricing of the frequency bands; the legality and pricing of the commitments required; the legality of the draft of the public notice, as well as its annexes and the draft authorization term; and the programming code in Python.

### VOLUME OF AUDITED RESOURCES

R\$ 45.8 billion  
economic value of  
frequencies

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### SITUATION FOUND

In the draft of the public notice, illegalities were verified in the establishment of a frequency awarding regime different from those foreseen in the applicable legislation, automatically exempting the holding of a public call or bidding for the lots that do not receive price proposals during the bidding, without any support in the General Telecommunications Law (LGT).

Regarding the pricing of the 26 GHz band, weaknesses were observed in the methodology adopted by Anatel, due to insufficient motivation in the inclusion or

exclusion of countries in the international benchmarking and inconsistencies in

the use of purchasing power parity, an index for GDP comparisons, as a dollar conversion rate in the bids presented in the study.

Regarding the 3.5 GHz band, inconsistencies were identified, highlighting:

- a) distortion in the direction of the commitments of the national lots, by imposing on all winning bidders the same obligation to serve all municipalities whose operation was considered economically unfeasible;
- b) expansion of the scope of the coverage commitments relative to the regional lots, without these obligations being established in the text of the bid notice;
- c) inconsistencies in the quantity of base stations (ERB).

Regarding the pricing of the 700 MHz, 2.3 GHz and 3.5 GHz frequency bands, several weaknesses were found, such as: a) the absence of a forecast of revenues from the partial transfer of the radiofrequency usage license; b) the use of market share incompatible with the real profile of existing competition in the locality; c) the lack of motivation for the assumption of making all the necessary network investments to cover 95% of the urban area in the first year of operation and for all the municipalities and localities to be covered; d) the inclusion, in the list of commitments, of localities and municipalities that already have access to mobile broadband service; e) the absence of a provision in the public notice for updating coverage commitments over time; f) the absence of regulatory roaming obligations; g) the use of erroneous depreciation values; and h) the use of criteria for defining the minimum prices of regional lots that do not reflect the fair value of the band and the commitments.

Regarding the Entity Administering the 3.5 GHz band (EAF) and its commitments, weaknesses were also identified, such as signs of overestimation of the costs necessary to implement the commitment to migrate the signal reception by satellite dishes in the C band to the Ku band.

In relation to the Private Communications Network of the Federal Public Administration and the Integrated and Sustainable Amazon Program (Pais), we identified violations of the General Telecommunications Law, of bidding norms, and of budgetary and fiscal norms, as well as the risk of damage to the public Treasury.

On the subject of education, given the distinction between access coverage of schools and connectivity, as the former term refers to the possibility of the school being located in an area where it is possible to be served by a given technology, and connectivity means the actual connection of the school to the broadband network, it was concluded that there were no commitments in the draft 5G notice and its annexes that expressly required the winning companies to connect any school in the next twenty years.

### WHAT IS THE PROPOSED FORWARDING?

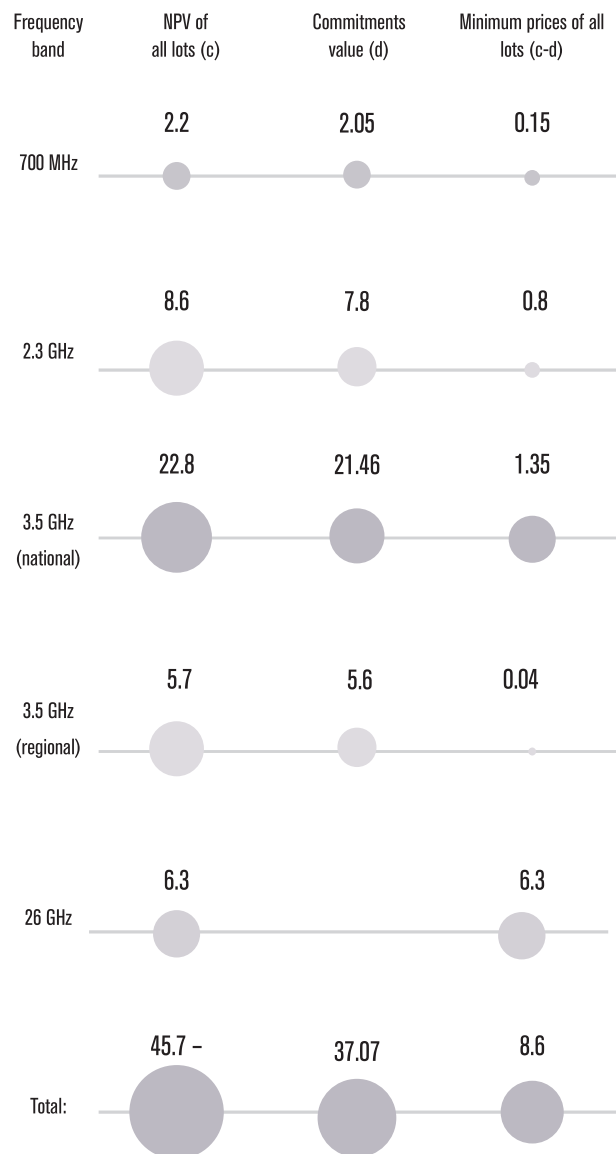
The TCU issued several determinations to adjust the notice of the 5G bid to give it more transparency and legal security and, also, in the pricing of the radio frequency bands, in order to reflect the valuation of the asset at its fair and real price.

### BENEFITS?

As effective benefits resulting from the inspection, we found the improvement of the pricing study for the 26 GHz band; the suppression of the 26% additional markup on the estimated costs for the implementation of the Pais and Rede Privativa de Comunicação projects of the Federal Public Administration, allowing the reallocation of these values to other commitments foreseen in the 5G bid; reduction of the costs foreseen for the commitment to migrate signal reception by C-band satellite dishes to Ku-band; and the identification of irregularities likely to cause losses to the public coffers, which must be corrected prior to the publication of the public notice.

Recommendations were also made to improve the draft of the public notice, among others, with the aim of expanding the dispute and bidding for regional lots of the D type frequency of 3.5 GHz; to improve the calculation of costs related to the migration of TVRO; to correct inconsistencies of modeling related to assumptions used in the pricing of assets; to establish periodic reviews of the localities targeted by the coverage commitments; and to evaluate the obligation of connectivity for public schools of basic education.

### NPV and Commitment Values of the 5G bid frequency bands and their minimum prices



### COURT DECISIONS:

Court Decision: 2.032/2021-TCU-Full Court  
 Session date: August 25, 2021  
 Rapporteur: Minister Raimundo Carreiro  
 TC: 000.350/2021-4  
 Technical Department in charge:  
 Department of Infrastructure Sector (SeinfraCOM)