

## **Decision**

### **Revision of the reference speeds associated with coverage obligations in the 800 MHz frequency band**

**November 2019**



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## 1. Framework

Regulation no. 560-A/2011 of 19 October (Auction Regulation for the allocation of rights of use of frequencies in the 450 MHz, 800 MHz, 900 MHz, 1800 MHz, 2.1 GHz and 2.6 GHz bands - the "Auction Regulation"<sup>1</sup>) imposed, upon entering into force, a coverage obligation as a condition to be associated with the rights of use to be allocated in the 800 MHz frequency band. This obligation was imposed under point b) of paragraph 2 of article 33 and article 34 of the Auction Regulation and pursuant to point a) of paragraph 1 of article 32 of Law 5/2004 of 10 February ("Electronic Communications Law").

In this context, pursuant to paragraph 1 of article 34 of the Auction Regulation, each 2 x 5 MHz lot in the 800 MHz frequency band carries an associated obligation to provide coverage of up to 80 parishes that generally lack mobile broadband coverage.

As a result of the auction and as holders of rights of use of frequencies over 2x10 MHz in the 800 MHz frequency band, each of the companies MEO – Serviços de Comunicações e Multimédia, S.A. ("MEO"), NOS Comunicações, S.A. ("NOS") and Vodafone Portugal - Comunicações Pessoais S.A. ("VODAFONE") was required to provide coverage of up to 160 parishes generally lacking mobile broadband coverage, as set out in the respective titles governing the rights of use of frequencies<sup>2</sup>.

The specification of these coverage obligations entailed, in a first phase, definition of geographical scope. This was achieved through the selection of 160 parishes by each holder, based on the list of 480 parishes generally lacking mobile broadband coverage previously provided by ANACOM, in accordance with the provisions of paragraphs 2 and 3 of article 34 of the Auction Regulation.

In a second phase of the specification of these coverage obligations, ANACOM determined the data transmission speed to be provided through the mobile broadband service (the "reference speed"), pursuant to paragraphs 5 to 7 of article 34 of the Auction Regulation. The methodology to be used for establishing and revising the reference speeds associated

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<sup>1</sup>Available at <https://www.anacom.pt/render.jsp?contentId=1413846>.

<sup>2</sup>See titles of rights of use of frequencies for terrestrial electronic communications services nos. 01/2012 (point 18), 02/2012 (point 18) and 03/2012 (point 19), all issued on 9 march 2012, available at <http://www.anacom.pt/render.jsp?categoryId=345109>.

with the coverage obligations in the 800 MHz frequency band was defined by determination of 21 March 2014<sup>3</sup> under the terms of article 34 of the Auction Regulation (the establishment of the reference speeds under the terms of paragraph 6 and their revision under paragraph 7).

In accordance with the Auction Regulation and with the defined methodology, on 03 March 2016<sup>4</sup>, ANACOM approved the reference speed for the purposes of the coverage obligations in the 800 MHz frequency band applicable to each company, as follows:

- a) 43.2 Mbps for MEO.
- b) 4.0 Mbps for NOS.
- c) 7.2 Mbps for VODAFONE.

Furthermore, ANACOM determined that the established coverage obligations would be made an integral part of Titles ICP-ANACOM no. 02/2012, no. 01/2012 and no. 03/2012, held respectively by MEO, NOS and VODAFONE.

Subsequently, pursuant to paragraph 7 of article 34 of the Auction Regulation and for the purpose of revising the reference speeds associated with the accomplishment of coverage obligations in the 800 MHz frequency band in 2018<sup>5</sup>, on 07 July 2016, ANACOM required<sup>6</sup> MEO, NOS and VODAFONE to each provide a ranked list of their customers. These lists, to be formulated with reference to 31 March 2018<sup>6</sup> and according to the methodology defined in the decision of 21 March 2014, were to be submitted to ANACOM no later than 31 May 2018<sup>6</sup>.

In this context, after receiving ranked lists of customers from MEO, NOS and VODAFONE with reference to 31 March 2018, ANACOM undertook a revision of the reference speed for each company, in accordance with its determination of 21 March 2014.

To this end, on 26 June 2019, ANACOM approved a draft decision on this revision, which was submitted to the prior hearing of interested parties, pursuant to articles 121 *et seq.* of *Código do Procedimento Administrativo* (Administrative Proceeding Code) and to the

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<sup>3</sup>Available at <https://www.anacom.pt/render.jsp?contentId=1195497>.

<sup>4</sup>Available at <https://www.anacom.pt/render.jsp?contentId=1381268>.

<sup>5</sup>And every second year after 2018.

<sup>6</sup>Available at <https://www.anacom.pt/render.jsp?contentId=1390692>.

general consultation procedure pursuant to articles 8 of the Electronic Communications Law. Under both procedures, interested parties were granted a period of 20 working days to submit written comments.

In response to these consultation procedures, a number of contributions were received, including from electronic communications service providers (MEO, NOS and VODAFONE), various Parish Councils and individuals.

Subsequent to the consultation, the corresponding report was prepared, which forms an integral part of this decision and includes a summary of the positions expressed on the draft decision submitted to the prior hearing, as well as the position taken by ANACOM with regard thereto.

## **2. Methodology to establish and revise the reference speeds**

With respect to the methodology for establishing and revising the reference speeds, on 21 March 2014, ANACOM decided as follows:

- In relation to commercial offers

*"(...) for the purpose of the establishment and review of the reference speed, all mobile broadband commercial offers subscribed on the reference date that are associated to maximum speeds exceeding 256 Kbps, are to be taken into consideration, regardless of any promotions, as well as the market segment they are aimed at, the form of marketing, the trademark under which they are marketed or whether they are available for new subscriptions, and only offers associated to mobile stations/equipment of an active user with actual use on the month concerned by the reference date (that is, the month of March 2014 or of each second year following 2014) must be accounted for. Moreover, in case on the reference date for the establishment and review of the reference speed there is more than one relevant commercial offer associated to the same mobile station/equipment of an active user with actual use, only the offer with the higher maximum speed is to be considered. In case a client changes to a new offer on the exact reference date, the most recent offer is to be considered."*

- As regards the ranking of customers

*“As regards the ranking provided for in the final part of paragraph 6 of article 34 of the Auction Regulation, each client must be considered as many times as the relevant commercial offers it has subscribed by each reference date.*

*Moreover, in case more than one mobile station/equipment of an active user with actual use is associated to a relevant commercial offer, all mobile stations/equipment of an active user with actual use associated to that offer shall be accounted for. As such, where a given client is associated to vector  $x$  of relevant commercial offers, and to vector  $y$  of mobile stations/equipment of an active user with actual use associated to offers  $x$ , a total of  $x*y$  times must be accounted for in the ranking list.”*

- As regards procedures and formula to apply in determining reference speeds

*“(…) MEO, OPTIMUS and VODAFONE must submit to ICP-ANACOM, in accordance with Annex I hereto, a ranked list of clients, in digital format and via email, to the address [dee.stats@anacom.pt](mailto:dee.stats@anacom.pt) (…).*

*Based on the information submitted, ICP-ANACOM shall determine the reference speed to which must correspond data transmission speed allowed by the mobile broadband service provided by each company in parishes to be covered, carrying out the respective notification. For this purpose, the formula to be applied in order to identify the client ranked in the upper limit of the lowest quartile of these offers, for each company subject to coverage obligations, is as follows:*

- i) if  $(n)/4$  is a whole number,  $(n)/4$ ;*
- ii) If  $(n)/4$  is not a whole number,  $INT[(n)/4]$ ,*

*where  $n$  is the total number of client subscribers of relevant commercial offers and  $INT$  consists in the rounding down of the value concerned to the nearest whole number.*

*Additionally, MEO, OPTIMUS and VODAFONE must fill in, in the field “Reference value”, included in Annex 1, their calculation for the reference speed, on the basis of the above mentioned formula.”*

### **3. Reference speed revision procedures and timetable**

Under the terms of paragraph 7 of article 34 of the Auction Regulation “ICP-ANACOM will perform a revision of the maximum transmission speed (...) at intervals of two years.

Regarding the entry into force of the speeds which result from the revision process, pursuant to the decision of 21 March 2014 on the methodology for establishing and revising reference speeds, which reiterates that the revision should take place every two years, ANACOM decided as follows:

*“Simultaneously with the review of reference speeds and bearing in mind the scale of the difference between the reference speed under review and the reference speed in force, ICP-ANACOM shall set a deadline for compliance with coverage obligations in conformity with reviewed reference speeds, and until expiry of such time-limit, reference speed previously set shall remain in force.*

*In this context, within 20 working days from expiry of the time-limit set by ICP-ANACOM in the scope of each review of reference speeds, MEO, OPTIMUS and VODAFONE are required to submit to this Authority information referred in Annex 3.”*

As part of the decision of 07 July 2016 on the timeframe for the revision of the reference speeds associated with the coverage obligations in the 800 MHz frequency band, which maintains the methodology defined in ANACOM's decision of 21 March 2014, ANACOM decided, as mentioned above, that MEO, NOS and VODAFONE should each submit ranked lists of customers with reference to 31 March 2018 (to be submitted no later than 31 May 2018).

### **4. Information sent by operators**

In this context, ANACOM has received the following communications for the purpose of revising the reference speeds:

- MEO sent the “*ranked list of mobile broadband customers under the terms of this decision*”, in txt format, by email on 01 June 2018 and by letter sent and received at ANACOM on 30 May 2018. The list indicated a reference speed of 5 Mbps;

- By email of 01 June 2018, NOS asked ANACOM to extend the deadline for sending the ranked list of customers by one working day (i.e. until the end of 04 June 2018), invoking constraints regarding the collection, processing and final formulation of the data necessary to obtain it. This request was accepted. On 04 June 2018, NOS sent the information for *“the purpose of establishing the reference speed to be associated with the coverage obligations provided for the 800 MHz frequency band”* in txt format by email, stating in the Annex that the reference speed is 21 Mbps;
- On 01 June 2018, VODAFONE sent the list in txt format, *“with reference to 31 March 2018 for the purpose of establishing and revising the reference speeds associated with coverage obligations in the 800 MHz frequency band”*, stating that, based on the *“application of the methodology defined in the determination, the reference speed resulting from Vodafone’s calculations is 43.2 Mbps.”*

## **5. Determination of reference speeds**

### **5.1. NOS and VODAFONE**

In receipt of the information reported by NOS and VODAFONE, ANACOM proceeded with its calculation of the respective reference speeds, in accordance with its Decision of 21 March 2014, applying the formula indicated in section **Error! Unknown switch argument.**, having identified the customer at the upper limit of the lower quartile of the relevant commercial offers of each company.

This exercise confirmed the figures presented by the companies for their reference speeds.

Based on the application of this formula, the data transmission speed enabled by the mobile broadband service to be provided in the parishes where the coverage obligation is in force under the terms of article 34 of the Auction Regulation, in accordance with ANACOM determination of 21 March 2014, now corresponds to the following speeds:

- a) NOS - 21 Mbps;
- b) Vodafone - 43.2 Mbps.

## 5.2. MEO

In MEO's case, and in the context of establishing the reference speeds which are currently in force, it is important to recall that the value in question was determined, not on the basis of the value declared by the company or the value resulting from the information reported to ANACOM, but based on the information that MEO was then publishing on its website.

As such, in the context of the required reporting of information by MEO, on 06 August 2014, MEO provided information on access speeds, excluding “*mobile phone Internet*” offers because, in MEO's view, information on access speeds indicated in the “*offer conditions*” referred merely to maximum and average registered speeds (whereas, in MEO's view, the determining criterion for subscription to these offers was traffic volume, not maximum speed set out in contracts).

In conclusion, MEO therefore took the view that, when considering mobile phone Internet offers for the purpose of establishing the reference speeds, the maximum speed to be taken into account remains in question. In MEO 's view, it would not be reasonable to establish reference speeds based on maximum registered speed, since this would be to assume that the vast majority of customers would use offers with maximum speeds of 150 Mbps, which is not in line with reality.

Following a number of iterations, on 10 December 2014, MEO submitted a new list that included “mobile phone internet” offers, and stated that “*the company collected information provided herein on the basis of the actual speed verified in the national territory by measuring the average speed experienced with the use of 3G technology*”. The speed indicated for the new list was 4 Mbps.

In light of the above and whereas:

- “*Condições de Oferta e de Utilização de Serviços de Comunicações Eletrónicas da PT Comunicações, S.A.*” (*Conditions for Offer and Use of Electronic Communications Services provided by PT Comunicações, S.A.*)<sup>7</sup> indicate maximum speeds associated to offers of the mobile phone internet access service made

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<sup>7</sup> Document available on MEO's website.

*available by MEO on 31.03.2014, which correspond to maximum download speeds of 43.2 Mbps (3G network) and 150 Mbps (4G network);*

- *The number of customers who subscribed MEO's offers of the mobile phone internet access service is so high (...) compared to the relevant range for the purpose of the determination of the reference speed, that maximum download speeds of offers subscribed by such customers determine, on their own, the value of such speed (...);*
- *The Auction Regulation establishes coverage obligations for the 800 MHz band under articles 33, paragraph 2b), and 34, and these obligations may only be fulfilled using the 800 MHz and 900 MHz frequency bands according to titles issued to the three mobile operators;*
- *A "150 Mbps speed", considering a theoretical peak download data rate using LTE (Long Term Evolution) technology, and given the available 10 MHz bandwidth in the 800 MHz band, is only likely to be made available in the current state of the technology, under ideal and very special conditions, requiring among other aspects the use of MIMO (Multiple Input Multiple Output) 4x4 and not considering the necessary broadcasting and synchronization channels. As such, the referred 150 Mbps speed is not deemed realistically to be achievable taking into consideration the spectrum currently allocated in the 800 MHz band (...);*
- *This limitation conditions the correspondence between offers of the mobile phone internet access service provided by MEO and subscribed by its customers and maximum download speeds for mobile phone internet offers disclosed in "Condições de Oferta e de Utilização de Serviços de Comunicações Eletrónicas da PT Comunicações, S.A.", given that only the 43.2 Mbps may be realistically achieved;*

it was deemed by ANACOM that the maximum speed associated with MEO's offers of the mobile phone internet access service is 43.2 Mbps. Based on the application of the formula to determine the data transmission speed enabled by the mobile broadband service to be provided in the parishes subject to the coverage obligation under the terms of article 34 of the Auction Regulation, and in accordance with ANACOM's determination of 21 March 2014, the value established for MEO was 43.2 Mbps.

In compliance with its reporting obligation, on 30 May 2018, MEO sent its ranked list of customers with reference to 31 March 2018, which included its “*mobile phone Internet*” offers, indicating a data transmission rate of 5 Mbps for the customers of these offers. Again, given the large number of customers covered by these offers, the value of their data transmission speed leads to a reference speed value of 5 Mbps, as indicated by MEO itself.

However, contrary to some of MEO’s communications of 2014, its communication of 30 May 2018 did not contain any explanatory data for the indicated speeds. Accordingly, ANACOM, in line with the steps it took with respect to the decision of 03 March 2016, compared this data with the information contained in contracts, in communications issued to users and in the document “*Condições de oferta e de utilização de serviços de comunicações eletrónicas da MEO – Serviços de Comunicações e Multimédia, S.A.*” (Conditions governing the offer and use of MEO electronic communication services - hereafter “*offer conditions*”), which is made available on the company’s website and sets out the offer conditions of the “*mobile phone Internet*” service that it makes available on the market.

The “offer conditions” include the following information which, according to the document itself and the respective chapter, will have been updated on 02 March 2018:

*“For mobile phone Internet services and mobile Internet services for computers/tablets, the principal indicators of quality of service are estimated as follows:*

<b>Network</b>	<b>Estimated Maximum Speed (Mbps)</b>		<b>Estimated advertised speed (Mbps)</b>	
	<b>Download</b>	<b>Upload</b>	<b>Download</b>	<b>Upload</b>
<b>3G</b>	16	5	4	1.5
<b>4G</b>	80	40	30	15

*Note 1) 4G speed is available using 4G equipment and a USIM card. In locations without 4G coverage, 4G devices are compatible with the 3G network, in which case 3G network speeds apply.*

*Note 2) The maximum guaranteed download speed for the Mobile Phone Internet Service is 5 Mbps.*

*Note 3) The values indicated do not constitute minimum levels of quality of service, since actual download and upload speeds, at any given time, depend on multiple factors including: the speeds supported by the terminal equipment used, the amount of traffic being routed in the area of use, coverage in that zone or location, use inside buildings, the number of concurrent users, the number of applications that are*

*simultaneously running on the user's terminal equipment (firewall, antivirus, peer-to-peer applications, other sessions or applications competing with the internet session, etc.), operating system and hardware and software configuration of the user's terminal equipment, the characteristics of the servers used and the capacity of the networks that connect these servers to the internet, among other factors over which MEO lacks influence."*

In addition, the information that is published in the "help and support area" of MEO's website, as regards mobile Internet speed, includes the following information:

***"Mobile Internet Speeds***

*With devices that are **4G+** compatible, browse with the fastest mobile internet ever, with download speeds of up to **400 Mbps**.*

*With **4G** technology, browse with download speeds of up to **150 Mbps**, and with **3G** technology with download speeds of up to **43.2 Mbps**.*

*The actual speed of internet access depends on the access device and network coverage."*

Analysing the information that MEO includes in the "offer conditions" and in the "help and support" area of its website, which should be considered a communication to users<sup>8</sup>, and considering not only the Auction Regulation but ANACOM's previous decisions on the matter, the following is highlighted:

It does not follow from paragraphs 5 to 7 of article 34 of the Auction Regulation, nor from ANACOM's decision of 21 March 2014, that the speeds associated with mobile broadband offers must be those actually used by customers, whereas ANACOM stated that "*mobile broadband offers mean all offers supported on the mobile network, that are associated to maximum download speeds of 256 Kbps or more*", referring to "*offers the maximum speeds of which are defined in the respective contracts, in communications with users or in offer conditions*".

The value of 5 Mbps for "mobile phone internet" offers is not based on any of the values in the table included in the "offer conditions", nor does it stem from the information provided in the "help and support" area. Instead, this value appears to result from "Note 2) The

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<sup>8</sup> Furthermore, the latter includes information that is generally very simply and clearly structured, and which clearly seeks to convey relevant content to users - users are even surveyed at the end of the text on whether the content was useful.

maximum guaranteed download speed for the Mobile Phone Internet Service is 5 Mbps” (*our emphasis*).

The fact that there is a “*guaranteed maximum speed*” does not justify disregarding speeds which are not guaranteed or which are only potentially attainable under certain conditions, as there are merely indicative for the purpose of establishing reference speeds associated with coverage obligations applicable to operators.

Indeed, this option would have no correspondence in the letter or purpose of the provisions of article 34 of the Auction Regulation, considering that the offers in question are associated with maximum speeds, as defined by MEO in the offer conditions which govern its services.

It is also important to highlight that there was never an intention to use a speed that was guaranteed in a contractual commitment as a reference for the concept of “*maximum speed*”, since, in the majority of mobile broadband offers available on the market, the operators themselves list a series of caveats whereby the speeds offered cannot be guaranteed, in particular given the nature of the radio spectrum.

In fact, the methodology adopted for establishing and revising the reference speed reflects the commercial options taken by operators, in terms of how, within their freedom of economic initiative, they structure their mobile broadband offers. Nevertheless, these operators may associate a determined volume of traffic, which, in the case of mobile broadband for Internet access, necessarily has an associated maximum speed. This maximum speed may be guaranteed (whenever measured in absolute terms and stipulated in the respective subscription contract) or merely indicative (whenever determined in relative terms and included in communications to users or offer conditions for information purposes only).

In this respect, it should be noted that the maximum (estimated) speeds associated with the offers of the "mobile phone internet" access service made available by MEO on 31 March 2018 correspond to an "estimated maximum download speed" of 16 Mbps (3G network) and of 80 Mbps (4G network), as stated in the “offer conditions”, whereas in the “help-and-support” area, the maximum speeds indicated for the mobile Internet service are 400 Mbps (4G+), 150 Mbps (4G) and 43.2 Mbps (3G).

On the other hand, the reference to “*Estimated Maximum Speed*” used by MEO in its “*Offer Conditions*” document differs from the one used by MEO in 2014, where it referred to “*Maximum Speed*”. However, this is a development of terminology which results from the entry into force of Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015<sup>9</sup> (“*Network Neutrality Regulation*”).

As such, “*Estimated maximum speed*” is a concept which derives from the application, *inter alia*, of Article 4 d) of the Regulation, which refers to the information to be disclosed by Internet service providers, and which includes a provision specifying “*a clear and comprehensible explanation of the minimum, normally available, maximum and advertised download and upload speed of the internet access services in the case of fixed networks, or of the estimated maximum and advertised download and upload speed of the internet access services in the case of mobile networks (...)*” (our emphasis).

Given that the “*Network Neutrality Regulation*” only entered into force on 30 April 2016 in this regard, it is understandable that MEO did not previously refer to “*Estimated maximum speed*” in referring to its provision of mobile Internet access services, but merely to “*Maximum speed*”. However, these are just two ways of referring to the same concept (to such an extent that the term “*Estimated maximum speed*” replaced the term “*Maximum speed*” in MEO’s “*Offer Conditions*”, but was not included in the “*help-and-support*” area, albeit perhaps for the sake of language simplicity).

The entry into force of the “*Network Neutrality Regulation*” on 30 April 2016 also explains the fact that the new term is not contained in article 34 of the Auction Regulation, which refers to “*maximum speed*”, nor in ANACOM’s decisions on the determination of the methodology (decision of 21 March 2014) and on establishing the reference speeds (decision of 03 March 2016), which also refer to “*maximum speed*”.

As such, ANACOM can only read and apply the current framework considering “*estimated maximum speed*” as the term which is currently relevant for the application of the methodology.

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<sup>9</sup> Regulation which lays down measures concerning open internet access and amends Directive 2002/22/EC on universal service and users’ rights relating to electronic communications networks and services and amending Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union, available at <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:172:0010:0035:EN:PDF>.

In accordance with the approach adopted under the Decision of 03 March 2016, ANACOM believes that the "mobile phone internet" offers on the list reported by MEO can only be ranked based on "*maximum speed*" (now "*estimated maximum speed*"), and that "*maximum guaranteed speed*" cannot be used as a reference, since that would represent a departure from the letter and spirit of the Auction Regulation and of ANACOM's decision of 21 March 2014.

In this context, the 150 Mbps and 400 Mbps values should now be excluded, insofar as "A '*150 Mbps speed*', considering a theoretical peak download data rate using LTE (Long Term Evolution) technology, and given the available 10 MHz bandwidth in the 800 MHz band, is only likely to be made available in the current state of the technology, under ideal and very special conditions, requiring among other aspects the use of MIMO (Multiple Input Multiple Output) 4x4 and not considering the necessary broadcasting and synchronization channels. As such, the referred 150 Mbps speed is not deemed realistically to be achievable taking into consideration the spectrum currently allocated in the 800 MHz band (...);" - see ANACOM's decision of 03 March 2016. A speed of 400 Mbps, considering the available bandwidth in the 800 MHz band and taking into account the current state of technology, is not achievable using the 800 MHz band alone.

In the current state of technological development, 80 Mbps is only achievable in specific situations<sup>10</sup>: for example, with smart antennas (not yet implemented on a large scale, particularly on terminal equipment), high bandwidth and carrier aggregation techniques (which may include the use of multiple bands, i.e. bands other than 800 MHz, which is the object of obligations in the provision of services). It is therefore not considered appropriate to consider a speed of 80 Mbps as a reference given, among other factors, the amount of spectrum currently allocated in the 800 MHz band (10 MHz).

The maximum speed advertised by MEO for all mobile Internet offers, including "Mobile phone Internet" offers, was 150 Mbps and 43.2 Mbps on 31 March 2014. But, on 31 March 2018, according to the "offer conditions", it was 80 Mbps and 16 Mbps. However, there is no evidence that the offers made available by MEO between 2014 and 2018 have evolved so as to produce an overall reduction in the associated maximum speed; rather, all indication is that speeds have evolved in the opposite direction (e.g. through technological

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<sup>10</sup> See e.g. <http://www.telecomsource.net/showthread.php?3155-LTE-UL-and-DL-peak-data-rate-with-different-bandwidth-and-techniques>.

development and greater density of installed base stations); moreover, MEO also advertises different values, substantially higher than those indicated in the “offer conditions”, on its website, in the “help and support” area, referring to maximum speeds of 400 Mbps, 150 Mbps and 43.2 Mbps.

In view of the above, ANACOM cannot fail to consider the information provided by MEO on its website in the "help and support" area and so conclude that, given the above technical limitations regarding the maximum speeds of 400 Mbps 150 Mbps and 80 Mbps, the maximum speed associated with “Mobile Internet” offers is 43.2 Mbps.

Accordingly, in receipt of the information reported by MEO concerning the ranked list of customers and considering that the maximum speed associated with the "mobile phone Internet" offers is 43.2 Mbps, ANACOM calculated the reference speed by applying the formula given in section **Error! Unknown switch argument.**, having identified the customer who is at the upper limit of the lower quartile of the relevant commercial offers of MEO.

Consequently, the data transmission speed enabled by the mobile broadband service to be provided by MEO in the parishes where the coverage obligation is in force under the terms of article 34 of the Auction Regulation should remain at 43.2 Mbps, the value to which the company has been subject since ANACOM's decision of 03 March 2016.

## **6. Timetable for entry into force**

Since the reference speeds in force since 10 March 2016 for NOS (4.0 Mbps) and VODAFONE (7.2 Mbps) differ from the values now established and assuming that these providers will need to make adjustments to the configuration of network equipment as a result, it is considered appropriate to set out a timetable that will enable compliance with coverage obligations in accordance with the revised reference speeds.

This timetable must also be determined based on the requirement that reference speeds keep pace, as far as possible, with the evolution of provider offers, in particular the evolution of the highest value among speeds associated with mobile broadband commercial offers subscribed to by customers in the lower quartile of these offers, which were reported to ANACOM in May 2018.

In this context, it is fitting to set at a time limit of six months for NOS and VODAFONE to accomplish compliance with the coverage obligations in accordance with the revised reference speeds as regards 50% of the parishes and of nine months for compliance with the obligations in 100% of the parishes - this time limit is considered as ensuring an appropriate balance between the interests of the companies, which are given time to adapt to the new values, and the interests of end-users, who should be able to benefit from these reference speeds at the earliest opportunity.

In the case of MEO, there is no justification for such a delay, since the reference speed now established has not been changed and the company remains subject to compliance with the same reference speed as previously.

NOS and VODAFONE shall, no later than 20 working days following the end of the six-month time limit, submit to ANACOM the information set out in Annex 3 of the final decision on the methodology for establishing and revising the reference speeds associated with coverage obligations in the 800 MHz frequency band (decision approved on 21 March 2014) in relation to the 50% of parishes that are to be given coverage in accordance with the reference speeds now determined. This reporting is without prejudice to the obligation already laid down in the same decision to send information with reference to the end of the overall time limit (in this case the 9 month time limit).

## **7. Decision**

Accordingly, under the terms of article 20 and of point a) of paragraph 1 of article 32 of *Lei das Comunicações Eletrónicas* (Electronic Communications Law), of paragraph 1 and point b) of paragraph 2 of article 33 and paragraphs 4 to 7 of article 34, both articles of the Auction Regulation, under point g) of paragraph 1 of article 9 and point b) of paragraph 1 of article 26 of its Statutes (approved by Decree-Law no. 339/2015 of 16 March), and in light of the information reported by the companies subject to the coverage obligations described above, ANACOM's Board of Directors determines:

1. To revise and establish the reference speed for the purposes of coverage obligations in the 800 MHz frequency band to which each company is bound, as follows:
  - a) 43.2 Mbps for MEO – Serviços de Comunicações e Multimédia, S.A.

- b) 21 Mbps for NOS - Comunicações, S.A.
  - c) 43.2 Mbps for VODAFONE Portugal - Comunicações Pessoais S.A.
2. To grant NOS and VODAFONE a maximum period of nine months to ensure compliance with the coverage obligations in accordance with the revised reference speeds for all parishes covered by these obligations and a period of six months for 50% of parishes covered by these obligations, whereby, until the expiry of these time limits, the reference speeds in force are those established in ANACOM's determination of 03 March 2016.
  3. To determine that the coverage obligations established pursuant to the preceding paragraph shall become an integral part:
    - a) As regards MEO, of Title ICP-ANACOM 02/2012, according to point 18 thereof.
    - b) As regards NOS, of Title ICP-ANACOM 01/2012, according to point 18 thereof.
    - c) As regards VODAFONE, of Title ICP-ANACOM 03/2012, according to point 19 thereof.
  4. To determine that NOS and VODAFONE shall submit the information set out in Annex 3 of the final decision on the methodology for establishing and revising the reference speeds associated with coverage obligations in the 800 MHz frequency band (decision approved on 21 March 2014) in relation to the 50% of parishes that are to be given coverage with the reference speeds now determined, submitting said information to ANACOM no later than 20 working days following the end of the six-month time limit.

Lisbon, 21 November 2019.